THE MILLER'S CHRISTMAS

HOLIDAY NUMBER

1892

THE CANADIAN MILLER

AND GRAIN TRADE REVIEW.

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TORONTO LITHOGRAPHING

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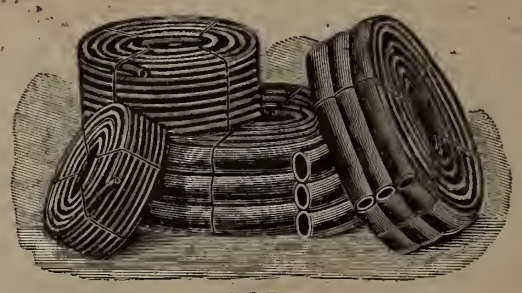

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW

NEW SERIES "MECHANICAL AND MILLING NEWS"

OLD SERIES, VOL. X. / NEW SERIES, VOL. II. } NUMBER 1. TORONTO, ONT., JANUARY, 1892 { TERMS, $1.00 PER YEAR / SINGLE COPIES, 10 CENTS

MAGNOLIA METAL

IN USE BY EIGHT LEADING GOVERNMENTS

THE MAGNOLIA ANTI-FRICTION METAL CO., 74 Cortlandt Street, New York, N.Y. } NEW YORK, N.Y., March 5, 1891.

GENTLEMEN,—About March 26, 1890, samples of metal marked "Spooner's Finest Copperine Babbitt" were submitted to me for test; its test showed finest results, and on analysis it proved to contain no copper, and approximated the formula of Magnolia Metal.

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On January 31st, Magnolia Metal was tested, which ran fifteen minutes with 1800 lbs. to the square inch, and one hour with 2000 lbs. to the square inch, and at the end of the hour showed a temperature of 202 degrees, Fahrenheit. Under separate cover we hand you detailed reports of the tests, showing velocity of rubbing surface about 2,000 feet per minute, diameter of shaft 5 inches, and revolutions, about 1,500.

Yours truly, H. G. TORREY.

NOTE—Mr. Torrey is U. S. Assayer, and has been in U. S. Mint service at New York for 30 years.

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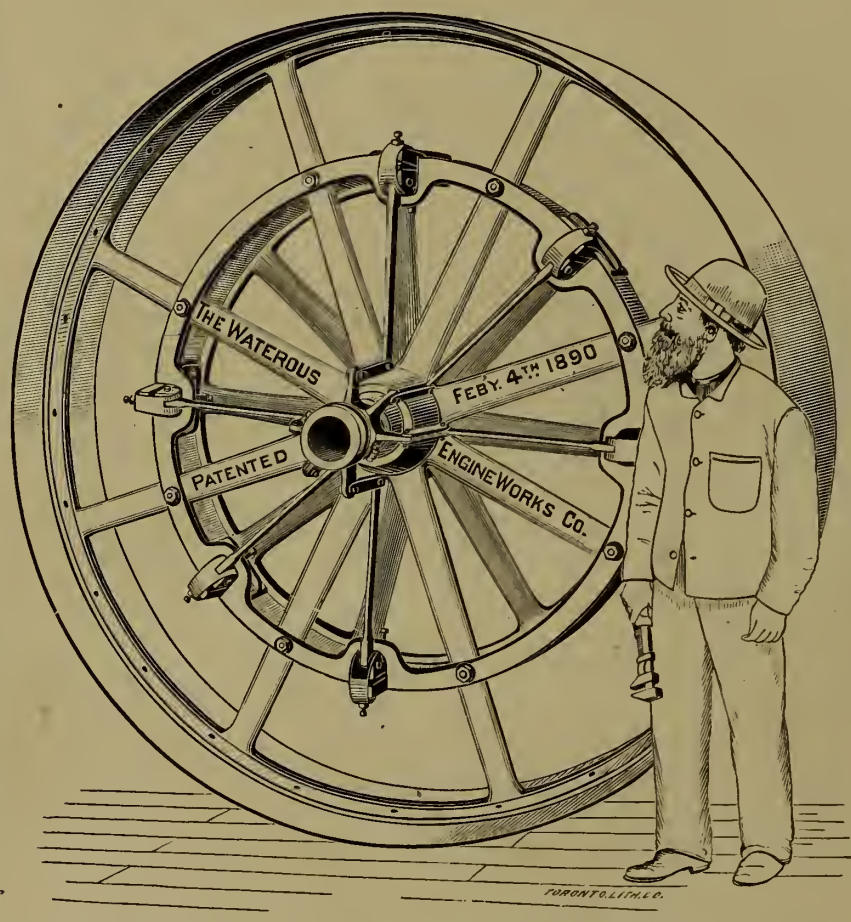

Has more special features to commend it, as the manager of a large electric plant said: "One of these pulleys slipped the other day. We threw it out, adjusted it, and had it at work again in three minutes. Had it been one of these other pulleys, would have had to stop the entire shaft and all the dynamos driven from it."

6 Grip, 93 x 22 in., furnished Royal Electric Co., Montreal, who, after using several months, show their appreciation by ordering three 81 x 20 in.

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THE CANADIAN MILLER

Old Series, Vol. X. } Number 1.
New Series, Vol. II. }

TORONTO, ONT., JANUARY, 1892

{ Terms, $1.00 Per Year
{ Single Copies, 10 Cents

PEELING WHEAT.

THE method of peeling wheat and rye, as invented by Stefan Steinmetz in Leipzig, promises, according to the Leipziger Tageblatt, to simplify milling, and goes back to a system universally applied twenty or thirty years ago, to prevent the husk of the grain from being crushed, namely—by the use of water.

The problem of peeling the grain before the grinding process has occupied many experts and millers for more than fifty years; they did not only sacrifice their labor, but also their fortunes to obtain satisfactory results, but the cleaning was either insufficient or damaged the grain, and was, moreover, very expensive.

The cleaning and drying of grain in an artificial manner is not new, for twenty-nine years ago a certain Chichester in Brooklyn took out a patent in England for a machine in which the grain, in hollow pipes and tubes could be dried by hot air and centrifugal force, but to arrive at the desired effect it was necessary to apply great heat, and consequently the grain suffered much and was often burnt.

When the large "Bonsig Mill" was rebuilt in Berlin, there was washing machines to prepare grain for grinding in this manner, but they had only a short existence. In a comparatively short time the washing of the grain was abandoned, and the very expensive machinery doomed to lie useless, and old dry methods were again resorted to. Steinmetz has now revived the old system. He applies cold water, peels the grain in a machine, and dries it simultaneously with a strong current of dry air. The process is as follows: The rye or wheat is, as usual, separated from impurities by seives, magnet, cockle cylinder, etc., passing to a special machine, where, in three or four minutes, it assumes a shriveled appearance as the outer husk gets loose. It next falls into the peeling machine, where peculiarly shaped round plates, provided with steel brushes, work against each other in such a manner that the grain is peeled just as we pare almonds between the fingers. The husk, now entirely free, is at once removed, the brushes polish the grain, which, by a strong friction and current of air is so perfectly dried that after coming out of the machine it is fit for grinding; all the dust is removed as the husks are thrown out of the machine in thick, compact flocks, as well as the other refuse. The grain thus obtained yields a sound flour that has not been injured for baking purposes.

WHEAT STANDARDS AT LONDON.

THE London Mark Lane Express states that the London Produce Clearing House Grain Department has been revised so as to limit "the range of business in order to secure to speculators greater assurance of level quality and milling value within that range. Opinion at the Baltic appears to be unanimous in approving that step." In future "forward quotations" for wheat, published by the London Clearing House, will be for two qualities only, "but these will be guaranteed at No. 2, red winter level for America, and at No. 2 club Calcutta level for Indian." The writer of the paragraph regards it as "unfortunate, however, that at the very moment when our Government and the chambers of agriculture are working toward a unification of weights, a reforming committee of Baltic merchants should deliberately fix two different weights for the same measure. The American wheat quarter is to be 480 pounds weight, the Indian 496 pounds weight."

PRESENCE of mind is all well enough in some cases, but when a man finds himself in danger of freezing to death he shouldn't try to keep cool.

W. W. OGILVIE.

"Labor is the price which the gods visit on all things excellent."—Old proverb.

EMERSON in his sketch of Napoleon says: "That common-sense, which no sooner respects any end than it finds the means to effect it; the delight in the use of the means; in the choice, simplification and combining of means; the directness and thoroughness of his work; the prudence with which all was done, and the energy with which all was done"—these were characteristics of that great man of the world. These are the characteristics which mark W. W. Ogilvie a Napoleon of the milling trade in Canada.

Mr. Ogilvie is quick to see an end, he looks ahead, taking a long view of things, and, having seen the end, he then acts out the counsel of Carlyle, who, writing of great men, said, with such "to resolve is to do."

The business of the Ogilvies was founded by the

MR. W. W. OGILVIE.

grandfather of W. W. Ogilvie in 1801, when a mill was built at Jacques Cartier, near Quebec, and another a little later at Lachine Rapids. In 1852 Hon. A. W. Ogilvie, together with his brothers John and William, erected the Glenora mill on the Lachine Canal, and at subsequent dates mills were erected at Goderich, Seaforth, Winnipeg and Montreal. Within the past three months, as was chronicled in these columns at the time, Mr. Ogilvie has further added to his milling property by the purchase of the City Flouring mills, of Montreal, one of the oldest business concerns in that city, paying for the same $250,000.

Mr. Ogilvie's long views of business have been well illustrated in the attention he has given to milling and grain operations in Manitoba and the Northwest. He early entered the field as a buyer of Manitoba wheat, and where in 1876 his shipments did not exceed 500 bushels, the shipments to his own mills for the season 1890-91 were in excess of four million bushels, whilst for 1891-92 they will exceed by a large figure all previous records. Mr. Ogilvie's faith in the Northwest provinces, and the magnitude of his business, finds evidence not only in his large milling operations in Winnipeg, Man., but, in no small measure, in the fact that throughout these provinces he has found it necessary to erect twenty-seven elevators at various leading points to meet the needs of his business operations.

The well-known enterprise of the man carries its own interpretation, that in his different mills he could be satisfied with nothing short of the newest and best machinery that milling manufacturers can produce. He was among the first to introduce the roller process into his several mills, having gone to Hungary, where it was invented, in 1868, shortly after the process was put into practical operation. The head office at Montreal is one of the most attractive buildings of that city, including a handsomely-furnished and well-equipped reading and recreation room for his large staff of employees. The combined capacity of the Ogilvie mills is 7000 barrels a day.

"Opportunity," runs an old Latin proverb, "has hair in front, behind she is bald; if you seize her by the forelock you may hold her, but if suffered to escape not Jupiter himself could catch her again." Mr. Ogilvie's active and successful business career shows that he has never failed to seize the opportunities as they have presented themselves to him, and with shrewd and masterly grip he has held on to and developed them.

THE MILLER WOULD HAVE HIS PAPER.

FOR a considerable time past an application was received regularly each year from the rural postman at X—, in Germany, for a new leather bag. The authorities, surprised at this extraordinary waste, sent an official to inquire into the matter. That functionary had an interview with the old postman.

"How is it that you want a fresh bag every year? Other carriers make a bag last any number of years."

"Ah! but they don't go on the ice with it!"

"On the ice? Surely your bag is not required for anything but to carry letters and newspapers!"

"Newspapers! that's where it is. Our miller, who lives on the hillside yonder, gets his paper twice a week. That is all very well in summer time, but in winter, when the roads are frozen and slippery, it is as much as I can do to climb up to his house, and as for coming down again, why, you risk breaking your neck at every step.

"The miller is a very decent fellow, only a bit stubborn. He never gets any letters, so I tried to persuade him to give up his paper in the winter, as the type was so small, and he might injure his eyesight by reading in the long winter evenings, but he wouldn't listen to me. So I have to drag myself up to the mill as best I can, and instead of walking down the hill I just set the bag in the middle of the road, seat myself on it and slide down to the bottom of the hill in less than no time."

They were then in the depth of winter, and the inspector insisted upon witnessing the performance, during which he found it difficult to maintain his gravity.

After some persuasion he prevailed upon the miller to provide a small sledge to facilitate the delivery of his weekly papers when snow and ice were on the ground.

GRAHAM FLOUR OR BRAN?

Solicitous waiter—I'm afraid your Graham rolls are too fresh for you, sir?

Sarcastic diner—Fresh! They seem to be "bran" new.

STEAM; ITS INFLUENCE ON THE ARTS AND MANUFACTURES.

IN a series of most instructive articles on this subject, from the pen of the late Prof. F: A. P. Barnard, occurs the following admirably written eulogium of the services rendered by this mighty agent of civilization in the maintenance of the commercial and industrial supremacy of Great Britain, and a graphic picture of the slowness with which the revolutions caused by the introduction of steam were brought about, because of the lack of due appreciation of its enormous powers of usefulness. We quote from Prof. Barnard in what follows:

There remains to be mentioned one additional and most important consequence of the invention of the steam engine, which has impressed profoundly not merely the industrial but the political history of the world. If the cotton-gin has been responsible for much in controlling the political and social destinies of the Western continent, the steam engine has been for still more in fixing for England her place among the nations of the earth At the time when this splendid invention made its appearance, England called herself mistress of the seas, and assumed to be the equal, if not the superior, of any military power upon the land. This place she still claims, perhaps justly, though her title to the exclusive dominion of the waves can no longer pass unchallenged. But without the steam engine, the power of England would have long since suffered a hopeless paralysis. It is from the depths of her mines that she has drawn the aliment which has sustained her manufactures and fed her boundless commerce and built up the enormous wealth which is the basis of her present strength.

Her iron and coal have made her a hundred times richer than she could possibly have been if she had possessed instead of them all the gold of California and all the diamonds of Brazil. But a century ago, just as Watt was turning over in his mind his first crude notions of the motor which was destined to transform the constructive industry of the world, many a thoughtful patriot and statesman of Great Britain must have been regarding with anxiety and alarm the stagnation which seemed to be gradually creeping over the mining industry of his country, and the danger which menaced with speedy total extinction this great source of her national wealth. As the mines were sunk deeper, the expense of lifting to the surface the mineral extracted, of course increased; but this was a trifling consideration compared with the vastly greater expense of withdrawing the water which flowed in, in constantly increasing abundance, and which had to be raised from a constantly-increasing depth. In many instances mining had almost ceased to be remunerative; in many others quite. One after another the mines were abandoned and the water was allowed to fill them up. What had already happened in many instances could not fail to happen at length in all. An early ruin plainly impended over the mining industry of Great Britain, which could not fail to bring with it, and with the consequent failure of her fuel, an equal ruin to the manufactures, the commerce, the wealth and the political power of the British empire.

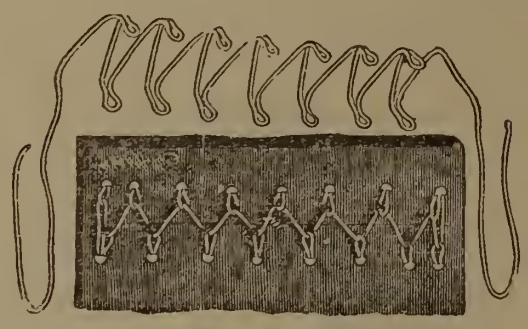
It was at this critical juncture that the new motor appeared. For some time after its appearance, it was only for the drainage of mines that its immense powers of usefulness seem to have been recognized; so imperfect at that time was the state of advancement of the mechanic arts! But applied to this purpose, then of paramount importance, it adverted at once the imminent danger which menaced British Industry, and restored to Britain the commercial scepter just as it was about to fall from her grasp. The greatness of the British empire to-day is, therefore, clearly due to her early possession of the steam-engine. Without it she must inevitably and speedily have sunk to a level of comparative insignificance.

It is remarkable that, vast as was the revolution which the steam-engine was destined to effect in the industrial world, the steps by which this was accomplished did not succeed each other with great rapidity. The first impression which the invention produced was in the relief it brought to mining. Its influence was next most distinctly felt in the development that it gave to textile manufactures. Then metallurgy yielded to its transforming power, and by degrees the same influence extended itself into every branch of mechanic art. But the application of the new power to locomotion upon the water and upon the land, applications which were destined to infuse into commerce a life and activity which it had never known before, and so to react upon production indirectly no less effectually than the same cause had already done directly, came at long intervals, and required the greater portion of a century for their full realization. It is interesting to observe how, in the infancy of a great invention, conceptions which are perfectly just, struggle painfully and often for a long time abortively, to embody themselves into form; and it is sad as well as interesting to observe what chilling lack of sympathy usually attends their announcement; what obstinate prejudices rise up to oppose their introduction; what ridicule labors to dishearten their authors; and what contemptuous refusal of substantial aid operates to paralyze effort. The practicability of applying steam to river navigation was repeatedly demonstrated before the close of the 18th century; but it was only after the lapse of forty years from the invention of the engine, that Fulton, in presence of a great multitude, assembled chiefly in the hope of finding amusement in his discomfiture, made at length the decisive experiment which was to force this truth upon the convictions of men beyond the possibility of further question.

Twenty years more elapsed before it was clearly seen in what way the same power might be made subservient to the uses of locomotion on the land; and ten more still before the problem which had been so long completely solved for inland waters was admitted to be so likewise for the ocean. We stand at the end of the first quarter of a century since the Atlantic was bridged by steam; and within that brief period the entire naval and almost the entire commercial marine of the world has undergone a complete transformation. The tonnage of vessels has been doubled, the duration of voyages has been diminished more than half, and the interchange of wealth between nations has increased no less in quantity than in rapidity. The effect of all this upon productive industry everywhere is too vast to be computed.

BELT FASTENER OF WIRE.

THE fastening is made of wire, which for about half its length is bent into a series of zigzags, the angles of which are bent upward at right angles, forming loops, the number of which on each side are equal to the number of holes in each end of the belt. The holes are made at such a distance from the ends of the belt that when they



are brought together the holes will be at the same distance apart as the rows of loops in the wire. In using the fastening, the ends of the belt are brought together, and the ends of the wire are passed through the holes in such a direction as to bring the zigzags on the inner side of the belt. The ends of the wire are then passed through the loops successively, forming a second series of zigzags upon the outside of the belt, and are twisted together, as shown in the engraving. In use, the fastening beds itself in the belt so as to leave the surface smooth. The fastener is easily applied and reliable in use.

BELT HOLDERS AND LOOSE PULLEYS.

BY J. L. O.

THE proper care of loose pulleys and idlers is a very important consideration in a large wood-working mill or factory where there is a large amount of oil and babbitt metal used to keep up these parts of the running gear of the mill; that is, to keep them in good condition. What is more disagreeable than to go into a mill and hear one or two loose pulleys rattling and jarring away at a fearful rate and doing great damage to the shaft, which in the end will be cut up and worn so badly that the shaft has to be taken to the machine shop and trued up. This can be done once or twice, and then the shaft is too small for further use unless the worn piece is cut off and a new piece welded on and trued up. I have often seen this done on account of the shaft being so badly cut up; the only resort was to weld a piece on and true up. I have seen pulleys reversed; that is, the tight changed over to the other side of the loose pulley on account of the shaft being so worn.

Some of the troubles mill men have to contend with in loose pulleys, are too small oil holes for oiling, the metal wearing and closing up the oil holes. When this happens, the pulley soon cuts out. Sometimes a loose pulley wears out on one end more than the other; this causes the belt to run crooked on the pulley. I have seen a belt worn out from rubbing on its edges before the face was a little bit worn. I have seen rods and sticks driven in the ground to keep the belt on the pulley when the machine was standing idle, from the loose pulley being worn oblong and one-sided. If loose pulleys could be discarded it would be a great blessing to men who have charge of such work in a planing mill, and a great saving of money in a year's time. On large flooring machines and surfacers, the driving-belt is generally six or eight inches wide; if it is rubber, it is four-ply, or, if it is leather, sometimes it is double thick. Both kinds are very heavy and have a hard pull on a pulley, and a pulley generally lasts eight months before it is required to be filled. In winter time great care has to be exercised to keep them well oiled, on account of the small space for oil, and the oil becomes chilled before it reaches its destination, hence the trouble rattling pulleys. I would prefer to work all night or any Sunday filling loose pulleys, than to hear loose pulleys rattling and jarring all day long.

The object of these remarks is to advocate something that will be an improvement upon the old methods as far as loose pulleys are concerned. I consider the Wellington belt holder a great improvement in this line wherever it can be used. We will take, for example, a weatherboard resaw. The belt holder is placed in proper position next to the driving pulley on the line shaft. The belt can be shifted off and on to the driving pulley at will. When the saw is not in use the belt is shifted to the belt holder and stands idle. This saves the belt, and a loose pulley is dispensed with—no loose pulley to look after. Small edging saws and self-feed rip-saws can be operated in the same manner, without loose pulleys, by having belt holders attached.

Patent friction clutches have been largely introduced into mills of all kinds because they fill a want long felt. I know of a place in this vicinity where the friction clutch is used to a great advantage by stopping in a moment a length of shafting when not in use, and the same works successfully. I know of a mill where there is in full operation several saws, run entirely without loose pulleys, the belt holder taking their place in every instance, giving entire satisfaction. The belt holder can be used on a flooring and ceiling machine in conjunction with a loose pulley, to advantage. When the machine is standing idle for a short space of time, and sometimes longer, the belt can be shifted over on the belt holder. This is a saving to the belt and loose pulley.

A very ingenious contrivance and a saving, is a small saw which I have seen put up, and is now in use, dispensing entirely with a loose pulley or belt holder, and it works successfully. There is a countershaft under the floor where the saw frame stands, driven by belt from the main shaft. On one end of the countershaft, next to the pulley which carries the belt from the main shaft, is a driving pulley which carries the belt up through the floor to the small driven pulley on the saw arbor. An iron-flanged pulley, eight inches in diameter, in a well-arranged lever-handle, secured to small yet strong wooden hangers, is placed at a suitable distance from the driving pulley on the countershaft. Two strong cords, 5-16-inch diameter, such as used for weighed window sash, are connected to this lever handle, passing through sash pulleys such as are used in window frames for raising sash. One cord is placed in one direction and the other one in another direction; pulling on one cord brings the binder pulley against the belt and starts the saw; pulling on the other, stops the saw at once. The flanges on the binder pulley (which runs as an idler on a shaft running through the binder frame) prevents the belt from running off the pulley when stopping the saw or releasing the belt when it is running at full speed. In fact, the arrangement works successfully. It is on the principle of a feed binder on a flooring machine. The whole arrangement interested me very much. It originated from a studious, thoughtful and painstaking mechanic. It is simple, yet durable, out of the way entirely, and finished up in a workmanlike manner. Any one contemplating erecting a rip saw of this kind, would do well to give the arrangement described above a careful study, as I am sure it will prove profitable in the end. A great nuisance is dispensed with; that is, too many loose pulleys, which require much time in looking after and keeping them in running order.

THE DESERONTO MILLS.

HISTORY OF THE FIRST ROLLER PROCESS MILL IN CANADA.

SUCCESS does not always crown the effort of the man who, more far-seeing than his neighbours, is ready to step out of the beaten path of business into untried fields. But men built on this plan more frequently succeed than fail, and the advantage and prestige that comes from the success attained is a fitting record for the courage shown in the step taken.

To the Rathbun Company, of Deseronto, Ont,. is to be given credit for planting the first roller process mill in Canada, and the second on the continent. This was in 1881, when the mill, shown in the cut accompanying this sketch, was erected. Its capacity then was 150 barrels daily. The stone building is the mill proper, size 45x70x45 feet, four stories, 12 to 16 feet each, with a one-storey fire-proof engine and boiler-room attached to the left-hand end. The supply of steam to operate the mill is taken from a refuse burner boiler plant distant about 200 feet, in which wet bark and refuse is used for fuel, except during the winter season, when this is not practicable. The building connected by a bridge is the storage house for bran, flour, etc., and is 40x60 feet and 45 feet high, built of plank laid flat on top of one another and spiked and sheathed with galvanized iron. To the rear of the mill is the grain elevator, 50x60 feet, 65 feet high, with a storage capacity of 45,000 bushels.

The Rathbun Company are large purchasers of grain and are manufacturers of several copyrighted brands of flour that hold a first position among the flours of this country. Possessing good connections with the Kingston and Napanee andCanadian Pacific Railways, the best rates are secured for Manitoba wheat, a considerable quantity of which is handled, as well as the wheats of our own province.

The mill now has a capacity of 250 barrels daily and during the nine years that it has been in operation the aggregate output of flour has been 414,695 barrels. The management is in the hands of Richard Rayburn, a gentleman whose face is familiar to members of the Dominion Millers' Association and other gatherings of Canadian millers, and who has been with the Rathbun company for more than a quarter of a century.

At the head of the Rathbun company is Edward W. Rathbun, general manager. As is known to many of our readers, this company is one of the largest manufacturing concerns in Canada, conducting extensive operations in lumber, a terra cotta and brick factory, shipbuilding, car works and gas works, besides flour milling and a general store, with branches in nearly all the leading towns of the province and at Oswego, N.Y. The company is incorporated by special Act of the Dominion Parliament and has a paid-up capital of $1,500,000.

THE RATHBUN MILLS, DESERONTO, ONT.

ONLY ONE WAY.

CLEAN your wheat is advice the poet may ridicule, the satirical lampoon, and those who have always practiced may call a chestnut, but if you want to make pure flour and clean offal, economically, you must follow it. It is impossible to make clear flour unless the wheat is clean. The break product of clean wheat is easy to separate, the middlings easy to purify and the bran easy to clean.

MANITOBA LETTER.

[Regular correspondence CANADIAN MILLER.]

MANITOBA, though one of the younger children of the Dominion, has shown a marvellous material growth within a few years. Mercantile business has gone forward with a bound that augurs hopefully for the future prosperity of this new country. Tall chimneys are not numerous with us yet, but I have no doubt that as population increases, healthy and substantial progress will be made in manufacturing lines.

We lead, of course, as an agricultural province, and this lead we are likely to hold with increased momentum as the country opens out and greater attention than even now is given to agricultural pursuits. One example of the largeness of our operations in agriculture is indicated in the development of the elevator system of the province within a single decade.

I have noticed in the columns of the MILLER mention from time to time of the many new elevators being erected in Manitoba, but one needs to get these all together to be sufficiently impressed with the splendor of the record. It would be ignoring history not to admit that the province owes much to the Canadian Pacific railway for its fine elevator system. Port Arthur, as an important transfer point for this great highway, was the first place selected for the erection of one of the company's elevators. This was in 1883, when an elevator of 350,000 bushels capacity was erected. In 1884 a second elevator, with a storage capacity of 1,250,000 bushels, was built at Fort William. In 1887 a second elevator was erected at this same point, with a capacity of 1,300,000 bushels. Fort William has now become for the C.P.R. a more important point than Port Arthur. These elevators are used for both storage and discharging purposes. At the present writing an annex is being built to the smaller of the two elevators, made necessary by the great crop of the past season. When the annex is completed the total storage capacity at Fort William will be 4,000,000 bushels. At Owen Sound, the C.P.R. have another elevator with a capacity of 285,000 bushels. None of these elevators can in one sense be claimed as belonging to this province, and yet it is for the purpose of storing and shipping the great grain crops of Manitoba and the Northwest that they have been erected.

TEN YEARS AGO

Manitoba was barren of any elevator system. The year 1891 closes with the following record :—

	No.	Capacity.
Elevators on the C.P.R.	127	8,445,000
Warehouses on the C.P.R.	77	389,100
Elevators and warehouses on M. and N.W.R.	53	654,000
Elevators and Warehouses on North P. Ry.	22	616,500
Grand total on all roads	279	10,104,600

The activity in the erection of elevators has been most conspicuous this year, thirty-five new country elevators having been erected on the Canadian Pacific, and four on the Manitoba Northwestern Railway. This record does not include the large annex of the C.P.R. at Fort William nor any new flat warehouses of the year.

A RAILWAY TROUBLE.

Grain circles were thrown into a state of ferment for some time in December. Since the close of navigation shipments of grain have been carried over the C.P.R. to Ogdensburg, N.Y., where connection was made with the West Shore system for New York. The majority of our grain shippers this year have been doing their business through New York brokers, rather than cultivating a direct export trade.

The C.P.R. had, apparently, made satisfactory arrangements with the West Shore for the carrying of Canadian grain, but this came along in such quantities that in a short time the West Shore road was blocked and they notified the C.P.R. that they could not continue the arrangement. They further alleged that difficulty was experienced in finding the parties to whom the grain was consigned, thus causing extra annoyance and delay of rolling stock. For the time grain men were terribly excited, for they had depended on the New York outlet for their shipments and a number of them had sold ahead.

The difficulty was finally overcome by the C.P.R. making an arrangement with the Lehigh Valley for connections with New York; and the West Shore have agreed, so soon as the line become more clear, to renew their arrangement with our national railway.

TOO MANY GRADES.

I do not know but that the Manitoba system of grading wheats had much to do with the action of the American railway. Canadian grades of wheat are not recognized by foreign ports, and shipments have to be allowed separate space. With the rush of grain this season this has been more than the railways could manage. In the arrangement with the Lehigh Valley only three grades of wheat will be carried, viz., No. 3 hard, and No. 1 and 2 regular. When the West Shore is in position to handle our wheat again, then the Winnipeg exchange will fix the grades that will be shipped over this road.

Despite that we are into mid-winter the weather has in many cases been fine enough to permit threshing to be continued.

Winnipeg, Man., Jan. 9, 1892. J.

ARGENTINE PROSPERITY.

ADVICES received from the Argentine by the last steamer show that the value of agricultural and pastoral products in that country during the present year will exceed anything before known. The value of the agricultural crop in 1891 is estimated at $85.000,000. The wheat product is estimated at 8,000,000 tons, valued at $32,000,000; the corn crop at 1,000,000 tons, valued at $15,000,000. The value of the wheat and corn surplus for export is estimated at $27,500,000. It is believed that this enormous crop, together with the returns from wool, hides, etc., will restore prosperity to this country.

HAS your subscription to CANADIAN MILLER expired? This is the season for renewals. $1.00 a year.

THE Canadian MILLER AND GRAIN TRADE REVIEW

PUBLISHED ON THE FIFTEENTH OF EACH MONTH

—BY—

ARTHUR G. MORTIMER

OFFICE:

75 CANADA LIFE ASSURANCE BUILDING

TORONTO, ONTARIO

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

OURSELVES.

THIS number of the CANADIAN MILLER marks the first issue of the tenth volume of publication, and we celebrate the occasion by appearing before our readers in a bran new suit of clothes. From cover to cover the MILLER is printed from new type, on paper throughout of a better quality than that hitherto used.

Exercising one of the privileges that come with anniversary occasions we will say a word or two about ourselves. Much labor has been bestowed on the mechanical preparation of the MILLER, and we have no hesitation in saying that no trade journal in Canada can claim to present a more attractive appearance than does the CANADIAN MILLER to-day. We give our readers a paper in which the best skill of the printer's art has been carefully and wisely exercised. And yet improvement will not stop here. It will not be a case of the new broom that sweeps clean only while new. Printed on the premises, from our own printing plant, with careful personal supervision, we shall be able to add further mechanical improvements as the months roll on.

We are not satisfied with producing a journal that shall reflect credit alone on printer, pressman and papermaker. During the year that is closed we have had numerous assurances from our readers that they have appreciated the efforts made to furnish a journal intelligently representing the milling and grain industries of this country.

Every desirable feature of the MILLER of past years will be retained, and we shall not be slow to introduce other new and interesting departments. Our old friend THE SCRIBE will keep wide open the door for friendly chats with millers and grain men. Throughout the year fresh importance will be added to this page by the introduction of cuts of prominent millers and grain men, whose utterances help in no small measure to form opinion on trade matters. Correspondence from leading commercial centres at home and abroad, will be a feature of the paper for 1892. In the editorial pages will be discussed those questions that have a direct bearing on the industries that the MILLER represents, and in every case free from entangling alliances of any nature. The monthly trade review will continue to be a valuable feature of the paper, and no care will be spared to make it complete and accurate in all particulars, whilst it will always be prepared from a perfectly independent and impartial standpoint. Technical articles from experienced and practical writers will occupy considerable space each month and in not a few cases these will be published hereafter with explanatory illustrations. A character sketch, with accompanying portrait, will also be a feature of the MILLER during 1892. We have pleasure in presenting our readers this month with a cut of W. W. Ogilvie, of Montreal, Que., principal of probably the largest milling concern in the world. Our pages will be further illustrated with engravings and pen and ink descriptions of the leading mills of the Dominion.

MORE WHEAT PREDICTIONS.

MR. C. WOOD DAVIS, Kansas' statistician, has supplemented his paper of May last, on the wheat supply of Europe and America, which was published in full in the CANADIAN MILLER at the time, with several contributions since on a similar line. Certain critics are inclined to ridicule everything Mr. Davis writes on the question, some going so far as to state that his predictions are mere guesses and clumsy guesses at that.

We do not pin our faith of the future food supply of the world on Mr. Davis' calculations. He is pessimistic in his views on most occasions, and the opinions of the pessimist, as much as those of his antithesis, the optimist, needs usually to be taken 'cum grano salis.' He does not take sufficiently into consideration the possibilities of present wheat lands, if treated in the manner suggested, for instance, by Mr. Atwater in his recent paper in the Century. Even with those who do not take as hopeful a view as that writer, the conviction is clear that we do not take out of our lands nearly the strength that might, with more frugal management, be secured.

Making allowance, however, for Mr. Davis' own methods of reaching his conclusions, we must admit that he is a careful student of conditions, as they create themselves from time to time, and that he has been able to impart much useful information on a question of great public interest.

His latest paper, in the Country Gentleman, deals at more length with Canada, and especially the Northwest, than his former articles. The question is asked, whether the yield and production of spring wheat in Manitoba and the region beyond cannot be increased by the use of suitable seed? "In Manitoba," he says, "there is likely to be a material increase in wheat production, but the Province is small and the better lands nearly all occupied if not yet brought into production. Taking Canada as a whole the wheat area is but little, if any, greater than ten years since, and the rate of increase has lagged far in the rear of the population rate and home requirements. It is contended with much show of reason, that north of Manitoba, stretching far toward the Arctic Circle, lies an immense region adapted to the profitable culture of the cereals. While much of this region possesses a very fertile soil it is unoccupied and without the means of transportation, and its adaptation to wheat-growing still hypothetical, as there has been no such extended and continuous cultivation of the plant as to dispel reasonable doubts as to the summer heats being sufficient to ripen the grain. But for such doubts we could confidently say that the Canadian Northwest would, when peopled and the land subdued, add very materially to the world's supply of bread, but existing conditions are such that but little relief can be hoped for from this source at an early day, and time is a very important element in the problem of the world's food supply at this juncture, as a period of scarcity seems impending, if not already here."

Mr. Davis is badly out this time in his statistical reference to Canada. In 1871 the wheat area of the entire Dominion was 1,646,781 acres; ten years later, 1881, this had increased to 2,342,355 acres. The wheat yield, spring and winter wheats, in 1871 was 16,723,873 bushels, which increased in 1881 to 32,350,269 bushels. The official figures for 1891 have not yet been compiled, but we know that in Ontario alone the total yield of spring and winter wheat is 32,584,026 bushels, an increase over the yield of the whole Dominion for 1881. To this is to be added the production of the other provinces, which will total up a figure largely in excess of the growth in population and home requirements during the last ten years.

We pointed out, in commenting on Mr. Davis' article of May last, that he does not lay nearly the importance on Manitoba and the Northwest as a wheat-growing country that its history and growth entitles it to. True, the population of Manitoba, as yet, is small, but 18,000 farmers raised for 1891 a wheat crop of 23,191,599 bushels, and if barley and oats are included, the yield is 40,000,000. A country that is capable of these things in the days of its childhood, what possibilities are not before it in the years ahead?

RUSSIAN CONDITIONS.

REPORTS from Russia, touching famine and crop conditions, have for some months been of so conflicting a nature that it is not an easy matter to know what is what in this ill-fated land.

The affirmation of a shortage of crops has been made with sufficient persistency to render it difficult to reach any other conclusion than that a shortage, and that on a large scale, exists.

The official and revised estimate of crops, which has recently been published, helps us now to get at some of the facts. These are as follows: Poland included, in measured imperial bushels, wheat, 233,000,000; rye, 522,000,000; barley, 146,000,000; oats, 445,000,000, and corn, 28,000,000. The official report of the crops of Russia for 1890, including Poland were: Wheat, 225,721,000 bushels; rye, 718,877,900; oats, 576,873,700 bushels; barley, 175,437,000, and corn 24,244,200.

These figures show a shortage in rye, barley and oats, and an increase in wheat and corn. The gross yield indicates a shortage for 1891, as compared with 1890. The conditions, however, are not nearly as black as painted, and making every allowance for the considerable shortage in a cereal as essential to the food supply of Russia as rye, and other causes, besides short crops, will need to explain the distress that exists among the peasants of that country to-day.

That distress is there is not to be doubted. Famine, and the inevitable suffering that follows in its train, has unfortunately only too powerful a hold on the land of the Czar. The letter of Count Tolstoi, of a few days since, published in the London Telegraph, is evidence that is not likely to be gainsaid. Reports from other trustworthy sources, where the effort has been to get at facts, not bare rumor, are confirmatory of what the philanthropic Count has told us. The numbers who are the victims of starvation may be far short of 32,000,000, which is perhaps the largest figures that have been given. We can discount the figure one half, or indeed more that this, and then is it possible in a land of plenty to conceive of the suffering such a story tells? The figures are unfortunately of that magnitude that we are apt to regard an odd million as nowhere—a million of human beings.

A serious hindrance to rendering effective assistance in the distressed Czardom is the physical character of the country. As W. T. Stead writes in the January Review of Reviews: "To feed a province is difficult enough even when there are railways and canals and rivers stretching like net work into every nook and corner of the smitten district; but to ration a whole nation spread over a country where railway opportunities do not exist and where draft cattle have perished in the early days of the famine, what can be done?" Famine may exist in one province and a surplus of food supplies in another, not more than a few hundred miles distant, and yet the means of transportation are so meagre that it is difficult to render the assistance required. The question is not altogether what to do, but what we have power to do.

Hardly less distressing, from a humantarian view at least, than the suffering from famine, are the stories that come to us of the heartlessness of the wealthy classes in Russia towards their less fortunate brethren. One story is that the rich merchants of St. Petersburg refuse to subscribe anything for the relief of their suffering countrymen. Worse than this, the story goes that the collection boxes, which had been placed about the corn exchange, were found when removed to be filled with bits of tin and pieces of paper. In numerous cases it is said that dealers after receiving exorbitant prices for their grain, sent to the famine district bags filled largely with dirt and combinations of refuse. It is a terrible reflection on men engaged in commercial pursuits that their schemes of dishonesty should extend to depths as low as these Russian merchants have been declared guilty of; but there is encouragement in the fact that in Russia, where justice is not always meted out to the despot with the righteousness that should mark justice in civilized lands, an example is being made of those who have been guilty of these deplorable practices. In the case of a number of dealers in grain and flour, in two of the provinces, who

mixed fine earth with their flour, which besides the hurtful effects it would have on the consumers, also added greatly to its weight, arrests have been made, and each committed to prison for a week, accompanied by a solemn warning that severe penalties would be inflicted if they were found guilty of a repetition of the offence.

THE NEWFOUNDLAND PROHIBITION.

THE Dominion Government has formally acknowledged the receipt of the resolution passed at the emergency meeting of the Dominion Millers' Association, re the embargo placed on Canadian flour by the Government of Newfoundland. Nothing is known of any further action by the Government.

We are not so sure that our Government, while desirous, we believe, to have this injustice righted, realize the full importance of the Newfoundland market to Canadian millers. It has been pointed out in an article on Canadian export trade in another column that what the milling trade in this country urgently needs is a market for their flour outside of the home market. They were successful in developing during the year recently closed an exceedingly satisfactory and growing trade with Newfoundland, and there can be no doubt that the output for 1892, if trade relations were left undisturbed, would show an encouraging increase over the previous year.

The sales last year were not less than 300,000 bbls. A pleasing feature of this trade was the fact that it was divided up into a number of hands, thus securing to millers, in different parts of the country, an increase of trade that was profitable to them and directly helpful to the locality where the mill was located. From a mill in the extreme western section of the province 12,000 barrels were shipped, in another case 7,000, again 4,000, and in still another 30,000. In some cases the mills were east, others west, or north. Not two or three but perhaps a half hundred mills in the province have had a share of this Newfoundland trade. The larger portion of this business was done within a period of six months, and in some cases the mills have orders ahead for delivery this spring, which, unless the prohibition is removed, will need to be cancelled.

The loss of the Newfoundland business does not mean alone the loss of profit on a certain number of barrels of flour. It may mean a lessening of production another year by the miller, which will have a measurable effect on the labor market; or, if the same output comes from the mill, a fresh market needs to be created; failing in this the flour is thrown on the home market, and the one result follows of an unhealthy drop in prices, depriving the millers of a profit on the season's business.

Orders for flour from the Newfoundland trade come to Canadian millers not later than March. If the present difficulty is not overcome almost immediately then the trade with this colony is lost for the year 1892. Orders will go into the hands of United States flour sellers; and even if the objectionable tariff regulation is annulled later the work of re-establishing business with the island will need to be taken hold of afresh by our millers.

These are a few facts we desire to strongly press upon the Government. Some matters will not spoil for keeping, but this is an affair that will not keep. Canada must make her protests to the Imperial Government through the Home Government and we are depending upon them to recognize the gravity of the situation and to act with promptness and vigor.

A MODEST MILLER.

NATURE made the miller a modest man, but it is not every day that one finds a representative of the trade, who is as thoroughly imbued with this spirit as the author of the following letter. The Northwestern Miller, of Minneapolis, is asking for contributions of flour to assist in the relief of the famine-stricken peasants of Russia, and from a Canadian miller has come a reply in these words :—

Editor Northwestern Miller:— ——, Ont., Dec. 30, 1891.

Enclosed I send you $100, to assist you in sending the shipload to the starving Russians.

I would have preferred giving flour, but am not aware that there is any flour going from Canada.

Please let me know when you receive the money, but do not mention my name in print, but enter it as a donation from a Canadian miller.

Our contemporary fittingly remarks that this is an example of genuine philanthropy. In the present age, when ostentation is a ruling passion, we find few men who are ready to live up to the Bible axiom: "Let not your right hand know what the left doeth." The disposition is to make every act tell for personal glorification, and nowhere is this more the case than in acts done for sweet charity's sake.

We are glad to know that there are some exceptions, though rare, to this practice, and that the author in one case is a Canadian miller. Our contemporary says further, and the fact speaks that much more for the generosity of this anonymous giver, that he is not as might be supposed the owner of one of the great Canadian mills. The capacity of his plant is of such a size that his gift is proportionately many times larger than the greatest of the gifts that have been received by our Minneapolis contemporary.

One good act, we are told, will incite another. "We sent the Canadian bills," adds the editor, "to the Bank of Nova Scotia, of this city, asking its manager if he could not give us par for them, Canadian bills being at a slight discount here. Mr. McLeod not only did so, but added a premium of $25, by way of a further donation."

It will be observed that this modest miller sent dollar bills. He did not send cheque or bank draft, keeping his kind act unknown even to his local banker.

It is a pleasure to break away from the ordinary routine and burden of every-day duties, which absorb so large an amount of attention with all of us, to record the good and unostentatious deed of a humble dusty, who does honour to the milling trade.

DEVELOPING CANADIAN EXPORT TRADE.

WE ask the attention of Canadian millers to an important announcement made by the publisher of this journal on page 15 of the present issue. One great concern of those engaged in milling in Canada is to find a sufficient and profitable outlet for the flour that their mills are capable of manufacturing. No concern needs to be given to quality so long as the present high standard is maintained. It has been demonstrated time and again that Canadian flour has no peer either near home or abroad. The position taken by this product in Jamaica at the time of the visit of Mr. Adam Brown to that country will be fresh in the minds of all readers. The success of our trade with Newfoundland during the season of 1891 was due to the splendid qualities of flour exported to this obstreperous little island. In Great Britain and on the continent our flours have always ranked high, and when reciprocal trade relations permitted the exporting of Canadian flour to the United States, our millers were able to hold their own with the best the republic could produce. The export trade of late years has not kept pace with the development and progress of milling in Canada. In some cases local difficulties have perhaps interfered. Be this as it may, there is no substantial reason why the export trade in Canadian flour should not assume very large proportions. The Dominion Millers' Association, to-day one of the most important commercial bodies in the country, has shown commendable and energetic effort in this direction. The CANADIAN MILLER, representing the milling industries of the Dominion, has not only exerted its influence to assist the association in any movement made, but as a perusal of the publisher's announcement, previously referred to, will show, we have given much thought of late to the completion of plans that will make known to flour handlers in other countries the advantages to be secured in handling Canadian flour.

These plans are now completed. A special department will be opened in the CANADIAN MILLER having a direct interest to dealers desirous of treating with Canadian millers; the conditions of the flour market will receive particular attention; questions having a relation to the carrying trade between Canada and these countries will be made a special study, so that reliable and complete information will be obtainable by those particularly requiring it.

The publisher undertakes that the MILLER will each month be placed in the hands of flour handlers at all these points. A list embracing some 750 names, and that is, we believe, as nearly complete as it can be made, has been prepared, covering the provinces of the Dominion together with Great Britain, Antwerp, West Indies and Newfoundland. Canadian millers who know of dealers in any of these fields, will oblige by sending names to the MILLER, and, if not already on the lists, they will be immediately placed there.

To a body of business men as enterprising as Canadian millers it is not necessary to suggest the value of a business announcement framed to meet this important constituency of flour handlers. We believe that in completing such a list we have been instrumental in supplying the missing link of the Canadian milling business. It will not be possible for a representative of the MILLER to call on nearly all the millers whose business announcements should come before these people, and we must rest on their well-known enterprise to communicate with us in regard to the matter, when particulars in detail will be furnished.

Already in this number, as the result of a hurried effort during the busiest month of the year, we are enabled to call attention to the announcements in this issue of the MILLER of a number of the leading firms engaged in milling in Canada.

EDITORIAL NOTES.

THIS number of the CANADIAN MILLER is a few days late in getting into the hands of subscribers, a result of the extra work necessary in placing the journal in new type throughout the whole of its twenty-two pages. Considerable important matter is also crowded out, but will appear in the next issue, which will be issued promptly on the 15th of the month, the regular date of publication.

THE Toronto Board of Trade should determine the meaning of the two terms "immediate" and "prompt" as applied to the shipment of grain. The latter term is usually understood to fix the limit at ten days. The former may carry the same interpretation or it may mean something else, which is the natural impression, as the terms are distinctive and supposed to be different, but what that something else is must be determined by a responsible authority.

THE grain trade of Ontario are not being fairly treated by the railroads in the export shipments of Manitoba wheat. The grain appears to get as far as Chicago and there it is allowed to rest. Some shipments have been lost track of for as long as two months. It may be that the railways are short of locomotive force to move the immense shipments going forward, but there is reason to believe that when the stuff gets as far as Chicago it is side-tracked, and a preference given to shipments from other sources nearer home. Our great railway corporations, as the carriers of the country, should be faithful to their contracts to carry their accepted shipments through to destination without regard to what country they have come from.

DELAYS in flour shipments at the seaboard is an old trouble with exporting millers. The subject was discussed with some warmth at the meeting of the Dominion Millers' Association in August last, but up to the present time no remedy to overcome the evil has been applied. United States millers have been experiencing similar trouble, which, however, has been materially lessened this year by the organization of a Millers' tracing bureau by Secretary Barry of the National Millers' Association. In other numbers of the CANADIAN MILLER we have given some account of the operations of the bureau, which has proven growingly successful. A large percentage of the cases of delay reported to the bureau have been quickly traced and the flour promptly forwarded to its destination. In one month alone 150,000 sacks were reported to the bureau, and the difficulty, with comparatively little effort, overcome in each shipment. Canadian millers for two months past have had more than the usual trouble with their export shipments, and they are no nearer a remedy than if the matter had not been touched in convention in August. What is to prevent the Dominion Millers' Association from entering into an arrangement with the National Association of the United States and securing for our millers the benefits of their tracing bureau? They have the work now well in hand, and it would not be a difficult matter to extend its machinery to Canada. The Executive of the Dominion Millers' Association ought to take the subject up at the next meeting.

VIEWS AND INTERVIEWS.

Bonuses.

There are those who condemn in unmeasured terms the system of municipalities granting bonuses. There can be no question that be the system good or bad, it has been greatly overworked, and, not infrequently, badly abused. This is also to be said against the system that it is a temptation for designing men to play upon the cupidity of the municipality and occasionally to practice the arts of the man who knows how to log roll with a wad of bills in his pocket. Not a few towns in Canada owe their position to-day to the impetus given them through the planting of manufacturies in their midst, and to secure which a bonus was necessary; in these cases it may be termed a quid pro quo. One does not have to go far to find, on the other hand, municipal corporations that rue the day they listened to the winsome tones of the bonus hunter. Touching directly on the bonusing of flour mills, however, this is the way a milling exchange views the question:— "Bonuses to secure flour mills and other manufacturing establishments are the subjects of a good deal of loose and unprofitable writing pro and con. It seems to be a perfectly proper thing for a town to give money, to give land, to give water-power, or to grant exemption from taxation for a time to secure such plants as are most needed in a new and growing place. It seems also to be perfectly proper for a miller or any other manufacturer to accept such gifts or exemptions. It is always a business exchange, in which each gives something and takes something. Those who condemn such exchanges do not always stop to ask themselves whether they thoroughly understand the conditions. Some forms of bonusing may be bad, but the principle of bonusing is not bad."

Breads of the Orient.

Are there differences in bread? Well, some of us who occasionally change our baker know there are breads and breads—breads sweet and breads sour, breads palatable and breads very unpalatable, brown bread and white bread and various other kinds. Yes, there are differences in bread. But we write now of the breads of our own land. What of the breads of other countries? Russia can tell a sad tale of the bread millions there are compelled to feed upon to-day. Lillie Hamilton French says that bread is something more than flour and water. In reality there is a great deal more in bread than any of the things we suppose. There is the bread of Persia. One never buys a loaf of that, but pays five cents for a sheet. This sheet is so thin that it can be thrown over the shoulder of the man who sells it in the street and who carries it as a tailor would his cloth. It is made in a curious way. The baker first rolls it on his counter, then, throwing it over his left arm, tosses and pulls it until it becomes thin enough for his fancy, doing with it very much as we do with our molasses candy when we want to make it white, except that we use only our hands. When the Persian baker gets his dough as he wants it, he gives it a dexterous fling over the floor of the oven, watching it very closely, for with bread so thin a few moments only are needed for a baking. Then there is the bread of the Bedouin. The Bedouin is a wanderer in the desert and is therefore never long enough in one place to have a regular home, much less an oven, so he can bake his bread only when he chooses to stop and build himself a fire. One can hardly object to that, but one does mind a little the way in which he does it, for the Bedouin is not very tidy. He not only puts his dough directly into the coals, but takes it out every few minutes to beat it and dust it, using the very same stick with which he has just been beating his camel. When his bread is done, as might be expected, it is none too good; it is both gritty and unpalatable. The Hindoo, though as primitive in his bread-making as the Bedouin, is a little more dainty. He waits until the wood-fire he has built on the ground has been burned to coals, then, putting two or three stones around it, he places on these a shallow metal bowl, the under side up. When his dough of flour and water has been pressed and pulled into a cake an inch and a half in thickness, he bakes it on the top of the bowl. It is by no means a bread to be despised. At some towns in Mount Lebanon the loaves are baked in circular form, about two feet across, and almost as thin as paper. It is related that once a foreigner, on eating his first meal in the mountains, took one of these loaves and spread it on his lap, thinking it was some new kind of napkin. Strange as this seemed to his Syrian host, we can hardly be surprised at the mistake, for to western eyes this thin flexible sheet looks far more like cloth than bread. But this kind of bread has one great advantage, for it does away with the necessity of using spoons. Those sitting at dinner tear off a piece from the loaf, fold it as a cup, and then dip a portion of food from the general dish in the centre of the table, devouring thus with each mouthful both spoon and contents. The housewives of Beyrout enjoy a touch of that convenient co-operation that is proposed by certain reformers of to-day; not that they take their meals in large public dining-rooms, but they do have public ovens, thus doing away with some of the household's "private gear." The dough is flattened out into disks of the proper size, and the boys or girls of the family put these on trays and carry them to the nearest oven, where they are soon baked on the smooth hot slabs.

John Bull Talks Back.

W. J. Bates, a clever contributor to the Milling Gazette, of London, Eng., talks very plainly to United States millers, who, he thinks, "have lost their heads over the late bountiful harvest." He assures the milling press of the American republic that they will not find it easy work to fix the date of the extinction of British milling. There was a time when the English miller had genuine cause to fear for the milling industry, but the tide has turned, and rapid and profitable progress is being made in an opposite direction. Mr. Bates fires this bit of milling history at his American friends: "One of the greatest milling combinations in America is now an English company, and so successful that its shares stand at a discount of 25 per cent.! The position of another great combination in Minneapolis is shown by published statements to be in hopeless insolvency. Are these the firms, I wonder, who are to supplant the British miller? If not they, who, then? A very different state of affairs is presented by the English companies; the largest concern in this country pays dividends of 17½ per cent., and its shares are at a high premium; while another in the north pays 10 per cent. and promises to be more successful in the future. These are the sort of facts that should temper the indiscretion of our blatant critics." He refers rather ironically to the fuss recently made over the shipment of bran from America, assuring the residents of this western hemisphere, that "one swallow does not make a summer, neither does one shipment of bran mean the British millers' ruin; nor one good harvest in America mean the salvation of insolvent millers. It may interest these ardent scribes to know that we can do very well with all the bran America can send us. The probability is that John Bull will simply re-ship the greatest portion to the Continent at a profit. Equally interesting also, I hope, will be the fact that the price of maize has far more influence upon the price of mill offals in this country than all the bran America can send us; for when maize is dear, people buy mill offals, but when cheap they prefer maize. We are fortunately still able to do without the services of a Mr. McKinley, and to pay our way into the bargain. Happily we, as a nation, have not descended to the grasping, avaricious methods of our competitors across the water; but still believe in the old-fashioned political economy of buying in the cheapest and selling in the dearest market. Our friends reverse this policy, preferring to buy in the cheapest; and necessity compels them to sell in the cheapest."

A HASTY CONCLUSION.

IT is frequently intimated that the American wheat farmer is not securing the proper advantage from the deficiency in supplies in Europe. This is a hasty conclusion. Suppose Europe this season had a normal home supply. What would likely be the position of values in this country, with more than 650,000,000 bushels of wheat produced in the United States and Canada, under such conditions? Is it not likely that prices would be 20 to 25 cents per bushel lower? If this is a reasonable view, it may be reckoned that the American farmer has been and is now, securing a high premium for the surplus wheat which he has had.—Cincinnati Price Current.

CONTEMPORARY COMMENT.

WINTER WHEAT FLOURS.

From all the markets, foreign as well as domestic, come reports of steadily increasing preferences for winter wheat products. Although the larger portion of this season's exports of flour have been springs, the winters are in active demand in Great Britain and France Nor is the inquiry for winters a sentimental one, buyers standing ready to pay higher prices for the same grades of flour made from winter wheat. The restoration of winters to their former favor is in a large manner due to the new process adopted by the millers who were in the outset somewhat slow in making radical changes.—Miller's Review.

THE "HOLD-YOUR-WHEAT" FOLLY.

The folly of the "hold-your-wheat" counsel of the Farmers' Alliance bosses is probably now apparent enough even to strike the intelligence of these individuals. It has recently been estimated by European and American experts that so far as regards its purchases from the United States, nearly all Europe's wheat requirements until the crop of the closing half of 1892 comes to hand will be met by the middle of January. By that time Australia will begin to do its harvesting. India and Egypt commence in February and continue on through March, while Persia, Asia Minor and other exporting localities start in April. Thus there would, in any event, be a continuous stream of wheat into Europe from outside the United States, although, of course, in comparatively small volume, from January onward to July, when the reapers in the United States could resume work. From the present indications Europe could draw on those regions more heavily than usual in the early part of 1892 if there were any necessity. The prospects, on the whole, are for a fair yield in those quarters of the globe. The St. Louis Globe that gives the above warning also points out that the policy of making an artificial scarcity will give an impetus to wheat production and so tend to lower prices. Canadian farmers who are adopting the Farmers' Alliance policy may consider the above reasoning and facts with profit.—Montreal Journal of Commerce.

TEST YIELDS.

There is the same difference of opinion on this subject as on every other concerning the practial operations in a mill, and test yields are quite confusing. Tests by large mills using steam power vary from 30c. to 40c. per barrel, including package, while small millers using water power claim as low as 12½c. per barrel. Such tests are inconclusive where the grades are not properly accounted, and each miller will claim his brands are the best irrespective of the facts or the choice of the market. But generally it is a fact that the large mills with the facilities at their command can manufacture a barrel of flour at less cost, sell at a closer margin, and show a better percentage of profit on the investment that the general run of small mills regardless of the power used. Some small mills favorably located, where the products can be disposed of as fast as made, and partly at retail prices, require but a small capital to operate, as the money is turned often, make more on the investment than the most favorable located large mills, and that a fair share of the small millers make money is evidenced by the fact that they pay for their plants out of the business done, live well, establish a good credit and accumulate property. If properly constructed with a line of machinery permitted of making close yields and good flour, managed in a business-like manner, there is no reason why mills of 50 barrels and upward should not pay. The owners of small mills, with few exceptions, do not make proper estimates on the cost of manufacturing, that is, interest on capital invested, business capital, insurance, depreciation in value of machinery or salary of the proprietor, where personal attention is given. All the business should be taken into consideration, as well as fuel, wages of employes, grain and package. Yields should be run often to prevent miscalculation, and afford opportunity of detecting invisible losses. If more attention were paid to these details, fewer mills would run at a loss and more small millowners would make money.—The Millstone.

CAN you do without the CANADIAN MILLER? Think!

GREENFIELD MILLS.

ESTABLISHED HALF A CENTURY AGO BY JOHN GOLDIE.

NEARLY fifty years ago, in 1846, John Goldie, father of David Goldie, of Ayr, erected a flour mill at Greenfield, Ont., a point one and a-half miles from what is now the flourishing village of Ayr, in the south riding of Waterloo county.

Milling in those days lacked not alone the improved machinery of the present day, used to so great advantage in changing the natural product to the desired flour or meal ; little was known of the carrying facilities of these more modern days. There was no network of railways then, such as the commercial world has placed at its use to-day. Flour from the Greenfield mills had to be teamed to Hamilton, 35 miles away. Some years later, when the Great Western Railway was opened, Paris, only eight miles distant, became the point of shipping. Notwithstanding these natural drawbacks a large and increasing trade was done, principally with the New England States. This was in the days of reciprocal trade relations with the United States. At the expiration of the reciprocity treaty the American field was lost for Canadian flour.

When the Credit Valley railway was built, shipping facilities were secured at Ayr, just one and a-half miles from the mill. Lately the Canadian Pacific, of which system the Credit Valley road is now part, have had surveyed the ground for a siding direct to the mill door, which will probably be built in the spring.

In 1864, the business having outgrown the old mill, a new building was erected on a site near the original mill. This is the mill in which the business is carried on to-day, shown in the cut accompanying this sketch. It is built of solid stone, with four stories and basement, size 88x44. An elevator is attached, having a capacity of 70,000 bushels, and in the same structure is placed the cleaning machinery.

In 1881 the mill was fitted up with roller process machinery, Mr. Goldie being one of the first in Canada to introduce this new system. The capacity of the mill was at that time increased to about 450 barrels. Since 1881 no year has passed without some new machinery being added to the plant. Mr. Goldie works on the principle of keeping in perfect touch with the most advanced progress in milling, and if the introduction of additional machinery of an improved character will give greater efficiency to the work of Greenfield mills, Mr. Goldie does not hesitate to introduce the improved machines. During the past summer several new sets of rolls and other new machines have been added, increasing the capacity to over 500 bbls. per day.

These mills, started by the father almost half a century ago, are now the sole property of the son, David Goldie, a name that has ever carried with it a guarantee of superior, and only superior, brands of flour. One of the most popular of these is Goldie's "Star" and is the leading winter wheat flour used in the Maritime provinces.

GREENFIELD MILLS, PROPERTY OF DAVID GOLDIE, AYR, ONT.

PRACTICAL HINTS ON MILLING.

BY AN AUSTRALIAN MILLER.

I HAVE worked mills on many different systems, and, as an operative miller, I can state that there are very few mills that are as perfect as they might easily be made, both as regards machinery, building and management. No doubt many master millers have suffered severely at the hands of the enterprising machinery drummer, and the careless and unskilled operator; and I do not wonder to hear them complain of the great expense they have gone to in the erection of new plant, only to find that when started the mill gives bad results, and that alterations and repairs are constantly necessary. Many a time we find everyone, from the head miller down to the sweeper, flying around cleaning chokes, altering spouts, and cooling hot bearings. The machinery may be perfect in itself, but, through being improperly erected, it works badly. Spouting is more inclined to choke than to run, shafts are not in proper line, and hot bearings are the result; belts are not up to the work imposed on them, and machines are not speeded so as to get the best work out of them. No wonder that profits are all swallowed up in alterations and so-called improvements. There is nothing more annoying than a badly running mill, and the unfortunate miller, is nearly worried to death cleaning chokes, stopping and starting machines, etc., the consequence being wasteful milling and inferior flour; for when so much else claims his attention, the miller has little time to attend to the grinding, and makes more pollard and bran than flour, for chokes cause waste; and intermittent and irregular running of machines—now overfed, now not fed enough—all results in bad work. Things often go on fairly well for a time, till, perhaps, soft wheat may come in, or a change in the atmosphere takes place, when all will be confusion again; or it may be there are two or three shifts in the mill, each shift trying to get the best of the other, with the result that machines are overloaded and stuff rushed through, quite regardless of the owner's pocket. Another source of trouble is when the boss thinks he understands the working of a mill himself, and interferes in everything, drumming the operator round, and treating him like an apprentice; or, again, giving him all sorts of jobs to look after, as if the machinery did not want his constant and careful attention. Every choke means serious waste and damage to quality in irregular dressing; every slipping or broken belt means waste, and revolving empty rolls damage each other, particularly if corrugated.

In case of a choke, the operator will run all over the mill to find where it is, and, having found it, sometimes uses a heavy stick, or even a sledge hammer, with what results to the spouts may be imagined. Again, we often see much flour and good stock going to waste all over the mill, through the carelessness of employees and those who are paid to look after the owner's interests. How often do we see men, when examining the product of rolls or dressing machines, throwing the samples on the floor to go as sweepings, or to the pollard bag. If all such small sources of waste were looked after, there would be much better returns at the end of the season.

I have handled machinery on most systems—American, English, and German—and am of opinion that almost any modern system will give good results if well managed and properly erected. Of course, like all other men, I have my own favorite system. All the different machines must support each other. Rolls, purifiers and silk-dressers, all combine to bring about good or bad work. Spouting should be sufficiently roomy, should not choke, and should be easily got at. Rollers should have easy adjustment and good automatic feeders, and should be fitted with suction, as in close-running rolls grinding warm, much of the hot air is carried away from spouts and dressing-machines. Dressers should be fitted with double conveyors and brushes, so that their capacity can be increased or decreased to suit quantity or quality of feed and state of the weather.

No man knows what mill machinery is capable of doing better than the operative miller who has worked with different systems and very little reliance should be placed on the assertions of the agent's interests in special system. Of course they are anxious to sell their own and assert that it "licks creation," but the fact remains that they all can show you testimonials to back up their assertions; and as a matter of fact, as I said before, they are all good enough if the plant is suitable and properly erected and run. One word more and I have done. The necessary supply of tools and appliances should always be ready to hand, in convenient places, so that no delay may occur in looking for them in case of an accident. A mill may run empty, or a machine be stopped for some time before the tool wanted to set things right is found.

A NEW IDEA IN BOILERS.

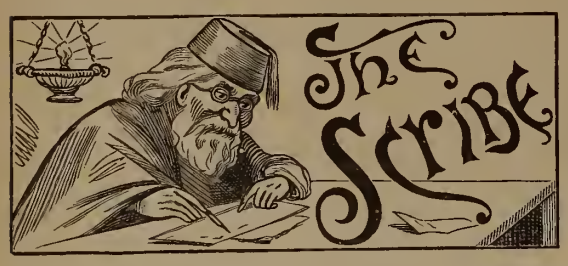
THAT steam boilers are subjected to extremely destructive strains when the furnaces are first started for raising steam is due to the fact that those portions of the boiler surrounding the furnace become highly heated, while the more remote parts remain for a long time comparatively cool. Hence, there is uneven expansion of the metals, and the consequence is that strains are set up in the boiler, which shorten its life and are otherwise very prejudicial. To remedy this Mr. C. E. Hudson, a naval engineer of experience, has devised a simple, ingenious system, which has had a successful practical trial on board a merchant vessel. The arrangement consists in substituting for the present furnace fronts steam-heating chambers of the same strength as the boiler. These chambers, which do not interfere with the grate furnace, are at starting filled with water from the bottom of the boiler, or from any point of the boiler where there is no circulation. A small fire is lighted in the furnace at first, which heats the water in the chambers, and by degrees the remainder of the water in the boiler becomes heated, and the shell is gradually warmed, a uniform temperature being attained. During this period there is neither pressure nor steam used, and as soon as the circulation ceases by reason of the accumulation of temperature, the heaters become auxiliary boilers, assisting the larger one. As soon as the temperature has become uniform the fires are hurried and steam is raised to a working pressure. The primary work of the heaters being accomplished, the chambers are used as feed water heaters. The feed water, instead of going into the boiler direct, is diverted into the heaters and becomes heated to a temperature of 200 degrees Fahrenheit. It will thus be seen that the arrangement is that of a combined automatic circulator and feed water heater, which not only does not rob the boiler of steam, but arrests and utilizes heat which would otherwise be wasted, or rather worse than wasted, as it radiates into the stock hole, and in some circumstances renders it unbearable. The steamship on which the system has been at work for nearly two years is the Cariganshire, a vessel of nearly 3,700 tons. The results of its application are stated by the engineer in charge to be entirely satisfactory. There has been no trouble whatever with it, and the temperature in the stoke hole is found to be reduced by 27°. A further important point is the fuel economy, a saving of 7 per cent. being shown on the average of five voyages.

AN OLD SAW.

AN upper mill and lower mill
Fell out about their water;
To war they went, that is, to law,
Resolved to give no quarter.

A lawyer was by each engaged,
And hotly they contended;
When fees grew scant, the war they waged
They judged were better ended.

The heavy costs remaining still
Were settled without bother;
One lawyer took the upper mill,
The lower mill the other.



IT is not too late for THE SCRIBE to extend to the many readers of the CANADIAN MILLER the warmest and brightest wishes of the New Year, along the roadways of which we are now travelling. May it be a prosperous year from start to finish with us all. I do not expect, you are too sensible to expect, that the year's travel will be void altogether of hindrances and difficulties. This is not the meaning of a prosperous year. I give strength to any of my parts, mental or physical, by the exercise of those parts; and strength is developed by being obliged to exert strength, exerting it with force, not by doing that which calls for no effort to do. Stumbling blocks will appear in the way, but they are there simply to be gotten out of the way, and they will be gotten away if we are made of the stuff that heroes are made of. A miller a hero? Yes, a hero is a man, in whatever walk of life, who heroically overcomes the drawbacks that we must all meet in one shape or another in our life's work. The man is still a babe who allows these things to frighten him and mar his life's work. The year will be both prosperous and happy if we determine to make it so. If I can be of assistance to a brother dusty don't hesitate to command me. We have been good friends throughout the year that has gone. Let us cultivate a still closer and wider friendship during the new year. This can be done best by frequent communication with one another. Do this by frequent writing or calling upon us.

* * * *

I have only opportunity to squeeze in a line, as a form goes to press, to congratulate the millers and grain men on the election of that deservedly popular representative of the trade, Hugh N. Baird, as president of the Toronto Board of Trade. In casting their votes for S. F. McKinnon for vice-president they were not forgetful of former kindnesses from this well-known merchant. Of course they were in the soup for council representatives.

* * * *

Wm. Crombie, a former resident of Huron county, Ont., writing from Young, North Dakota, says: "We had the worst blizzard for three days in December that I have seen since I left Ontario and arrived in Dakota, now ten years ago. Crops have been extra good this year, and threshing is only about two-thirds done. The grain is a good quality, but some of it was bleached by remaining too long in the stocks. Labor has been very scarce and dear."

* * * *

R. P. Roblin, of Winnipeg, Man., who returned from New York a week since, speaking to an interviewer regarding the grain blockades on the West Shore, confirms the statements made by other correspondents from Manitoba. He says the blockade was fully as bad as reported and that it was caused by the irregular way in which some dealers forwarded their wheat. Those who had consigned their stuff properly had no difficulty in getting accommodation from the railway in question. He found that the American railways were anxious to get the Canadian export business, but were compelled to take the action they did owing to the way the business was being conducted. Mr. Roblin says that Manitoba wheat is in demand at New York, and the dealers there realize that this country will in the future supply the hard wheats for the great consuming countries of the world.

* * * *

"The whaleback," said Mr. Carpenter, of Buffalo, manager of the Lake Superior Transit Company, who paid Toronto a visit a week since, "is revolutionizing the freight trade on the upper lakes. Eighteen of this new style of vessel are already in active operation on the lakes. They are not being confined to fresh water either, but some of them are in use on the seas. It was only recently that a whaleback went around Cape Horn and came up to Puget Sound. The great advantages of these vessels are their cheapness, their speed and their capacity. A whaleback can be constructed comparatively cheap, a good sized barque costing about $50,000. They do not require such powerful engines as ordinary vessels. Whalebacks on the Atlantic, equipped with engines of only 600 horse power, have been found speedier than the ordinary ocean tramps. Of course they do not attain the speed of the greyhounds, but if their engines were made a little stronger I think they would easily equal the fastest liners afloat. Old Capt. Macdougall, of Duluth, the inventor of the vessel, is kept busy superintending the construction of new vessels. He proposes to fit them up with cannon and says they would be of great use as war vessels. Their special utility would be in the defence of a harbour. Altogether the whaleback is a wonderful invention."

* * * *

Said a leading miller: "I see no reason why the office of the man who runs a flour mill should not be as clean and well kept as that of any other business man, yet I know that too frequently it is not so." I felt that my friend had been there, for, if you except the proverbial editor's den, I do not know of many more untidy places on this mundane sphere than the average miller's office. There are exceptions, of course, but I am not dealing in exceptions just now. No excuse is to be offered for the disorder that holds swing in either case; and, as far as the man of the pen is concerned, I have no sympathy with that phase of Bohemian journalism that excuses this kind of thing. I like a comment that has come into my hands from a writer on this subject, the reference being directed to the milling fraternity: "It is a trait of human nature for successful men to keep in touch with each other and it is difficult for the miller whose business is conducted in a shiftless way to secure the same hearing in the commercial world as the miller whose business is conducted in a methodical manner and who keeps pace with the progress of the times is given. It is not always true that the business man or miller who makes the best appearance is the more reliable or more prosperous of the two, but it is true that the world thinks best of that one who thinks enough of the ruling influences of the times to honestly court their favor."

* * * *

A writer in a milling exchange gives this counsel to young millers. I do not know that it need necessarily be confined to young men. I should like to see old and young accept the counsel as wise, and let the CANADIAN MILLER hear from many of them more frequently than is the case to-day. "Be not only a constant reader of milling journals, but become a correspondent or contributor. Do not say that you haven't time, for this can be done during your leisure hours. Do not be afraid of being ungrammatical, for the editor always stands ready to make your article readable. Search after valuable facts, and seize every one that is presented to your observation. There are various reasons why the young aspirant should write. One of the principle objects is the discipline of the mind. It has been said that the mind attains its maximum of strength by one process only—intense thought. Nothing will set one to thinking more than the attempt to write on some subject, even though it be a familiar one. When we begin to put down on paper our knowledge of a certain topic, we set our minds to thinking more earnestly; our thoughts become concentrated more or less on the one subject. When attempting to carry out a line of thought by meditation we are apt to be led away from the original subject and side-tracked to something else, we are more apt to let the mind take the easiest possible course. One is apt to imagine that he can only write a line or two, even on a topic with which he is quite familiar. But after one gets started on a subject many ideas present themselves and he is soon led in various directions in thought."

* * * *

Taking a run through the Board of Trade a few days ago I found grain men excited over the following circular letter that had been issued that day, bearing the signature of John Earls, of the Grand Trunk freight department: "We are advised by the managers of railways in Boston, that demurrage and other charges will accrue upon all grain sent to Boston and not promptly exported, either from elevators or ex-cars. We are therefore obliged to issue through bills of lading at the current export rail and ocean rates as authorized by the steamship companies, and to add to such ladings, in addition to the rate the following words: "And Boston terminal charges, as per manifest." If exporters do not desire to accept these ladings they can surrender our railway bills of lading to the steamship agents at Boston when exporting their grain and take ocean bills of lading from steamship companies after settling rail and terminal charges at Boston." "What has given occasion for a document of this nature," said Central Buyer C. B. Watts, "I do not know. It is a most unheard-of thing for our elevators to refuse storage. And to say that in lieu of this, demurrage shall be charged, is a piece of business that smacks of attempted despotism. Storage charges at Montreal, for example, are ¾c. bushel for first ten days, and at Boston the rate is a fraction higher, probably 1 ¼ cents. Demurrage charges are one dollar a day per car. Take cost of storage on say ten cars for the first ten days, and compare it with demurrage for same length of time, and one can see in a moment the injustice of the step. If our railways had designedly planned to handicap Canadian export trade to the full extent of their power, they could hardly do it more effectually than in action like the present, combined with the trouble that shippers, especially of Manitoba wheat, are experiencing just now, in aggravating delays of car-loads of stuff en route for export."

* * * *

The fixing of flour standards is a matter of the utmost importance to millers generally, and particularly to those of this province. I was glad to see the question handled with vigor and intelligence by men like J. I Spink, at the late meeting of the Dominion Miller Association. It seems hardly possible for anyone with a correct knowledge of the subject, and who does not allow himself to be prejudicially inclined in his view, to come to any other than the one conclusion that, in the words of Mr. Miall, Commissioner of Inland Revenue, "there were good grounds for the dissatisfaction recently expressed." I was glad to find Mr. Miall speaking so candidly on the question, showing that the department at Ottawa were evidently disposed to deal fairly with the millers. The Commissioner went on to say that, prior to anything appearing in the press, his attention had been drawn to the matter and he had communicated with several boards of trade with a view to securing suggestions for the amending of the Inspection Act and the removal of any cause for complaint. The present difficulty appears to have arisen from the fact that some of the boards of trade have been stretching the privileges they possess under the act, and have sent down to select the standards, in some cases, two or three men of indifferent ability, instead of one representative thoroughly up in the business. Mr. Miall says while it is right that the west as well as the east should have fair representation on the Board of Examiners, so that the flour standards should be equitable to all concerned, it was undesirable that the expenses of choosing the standards should overrun the original estimate of the department; and not only that, but it was desirable that representation on the board should be confined to men thoroughly up in the flour business. "I had," he remarked, "at one time thought of restricting representation to boards of trade where there is an inspector of flour, but this would hardly be fair to the other provinces, and would have left the matter entirely in the hands of the boards at Montreal and Quebec. As the grain from which our flour is produced is grown chiefly in Ontario, Manitoba and the Northwest, I think they are certainly entitled to representation. Nothing, of course, has yet been decided upon, and the department will be glad to receive suggestions on the subject. My own view is to limit the representation to places where there is an inspector of flour and to such other important centres as the Governor-in-Council may designate, one person thoroughly up in the trade from such important centres as may be chosen."

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TORONTO, ONT.

Office of the CANADIAN MILLER,
January 15, 1891.

THE GENERAL SURVEY.

THERE is nothing surprising in the statement that the grain situation has been one of general quietude for the past month. Allow for two weeks of holiday season to close up December, and the excitement of municipal elections, and kindred conditions in other directions for the first two weeks of the New Year, and no better explanation is required.

The time is favorable for a consideration of matters generally connected with the season's trade.

Take a statement that has been made on the authority of a writer, who is usually deemed reliable, viz., that the exports of wheat and flour from the United States and Canada, in the fall months of this year, have never been equalled. The New York Commercial Bulletin points out, that as respects the aggregate of exports the statement is true, but it is not true as to all the months since July. For even the enormous exports in the month of August, 1891, amounting to 26,277,682 bush. of flour included, were surpassed by the exports in the month of September, 1879, which were 25,647,971 bush. wheat and 517,046 bbls. flour, equivalent to 27,973,678 bush. wheat. It may be interesting to compare the movement this year, as far as it is now known, with the exports during the last half of the year 1879, and of the last half of the year 1880, for in both those years the wheat exports were larger than ever before, and larger than they have ever been since until this year :

	1891.	1880.	1879.
July	13,695,899	21,961,905	14,432,494
August	26,277,682	24,149,772	24,927,682
September	25,707,080	16,636,248	27,975,678
October	19,910,046	18,882,306	23,312,817
November	20,010,989	15,392,876	13,330,477
December	16,416,498	13,812,781	11,147,824
Total	121,899,194	110,837,978	115,127,272

The prospects of high prices in the near future is one of those subjects that does not down with some people. The MILLER, while never taking a gloomy view of the season's situation, has altogether failed to find tangible ground on which to base this expectation. We have so declared ourselves in discussing the question before, and the conditions each month only confirm the view we have taken. A certain class of English buyers are largely filled up with the view. Notwithstanding the fact that the visible supply of wheat in the United States and Canada continues to increase at a rate of not less than 1,000,000 bushels a week, combined with full supplies in Europe, still our English friends positively hold to the hope that before the spring flowers blossom and bloom the increase will take place. The Montreal Trade Bulletin, commenting on this subject, says : " It is amusing to read some of the correspondence received by last mail from Liverpool from firms who, while admitting the recent deline in prices, appear to regard it as altogether out of gear with the prospective relative position of supply and demand. They still maintain that supplies must fall to an unusually low ebb between next March and July, and that the most extraordinary deficiency will be experienced during that term. In view of this eventuality they look upon the continued liberal shipments from this side as absurd and tending to keep values considerably below what they otherwise would and might be. We have before pointed out the true position of receivers of wheat in England, the majority of whom are well loaded with high-priced stuff and consequently they look upon the continued free selling on this side as antagonistic to their realization of profits. It is very seldom that English buyers are found in this predicament, as their usual forte is to point out to shippers here the prospects of lower prices in the future ; but now that they are the actual possessors of large quantities of high-priced grain, they naturally feel that the United States and Canada have somewhat interfered with their usual methods of making profits. They are no doubt sincere in their belief of higher prices later on, and it, therefore, seems to us that their better plan would be to hammer them down for all they are worth in order to get in at bottom and thereby even up the losses they made by former purchases, which would give them a splendid opportunity to take full advantage of the big bulge which they look upon as certain to take place next March and July." We still have a certain population on this side of the Atlantic who are as big in hope of $1.50 wheat, or thereabouts, as John Bull, but our impression is that under the every day situation the number grows beautifully less.

It is a nice question just how much wheat is in farmers' bins. The impression throughout the country is that there is a good deal. An American grain exchange thinks it is probable that some 40 per cent. of the spring wheat is yet to be sold by the farmers, which, with 10 per cent. of that already sold to come to terminal markets, would seem to indicate that the railroads have actually hauled but little more than half the crop yet. On the north Pacific coast only about 10 per cent. remains to be marketed.

The rumor that comes from Odessa that the Russian ukase may be removed, has naturally given strength to the bear side of the market.

WHEAT.

The market has not been duller for some time. The bears have had the battle largely to themselves, and matters continue bearish. A drop of six cents per bushel in the Chicago markets inside of one week did its share to strengthen this feeling. The reports from Britain are hardly less bearish.

The London Evening List (Dornbusch) says : " It may be safely predicted that never before has the United Kingdom entered upon the new calendar year with more ample supplies of foreign breadstuffs. Our granaried stocks and our floating stocks are represented by 50,200,000 bushels, against 33,536,000 in 1890, and 37,000,000 bushels in 1889. The immediate result of this plethora may be seen in the almost stagnant condition of the United Kingdom markets, not only for c. i. f. parcels and cargoes, but also in the principle centres of distribution—it will take weeks to reduce this pile of food to normal dimensions. One of the greatest obstacles to the return of active trading is the fact that nearly all the merchant millers of the United Kingdom hold considerable stocks, which must be worked off before they (the millers) find it necessary to enter the market again."

Market prices at leading points are as follows : Liverpool : Spring wheat, 7s 11d to 7s 11½d ; red winter, 7s 11d to 7s 11½d ; No. 1 Cal., 8s 3d to 8s 3½. Chicago : Jan., 88c ; May, 92½d. Oswego : White state, $1.01 ; red, $1.02. St. Louis : Cash, 90c ; Feb., 91¼c ; May, 93⅛c. Duluth : No. 1 hard, cash, 87c ; May, 92¼ ; No. 1 Northern, cash, 86c ; May, 92¼c. Canadian : Ontario, 84c. Manitoba : No. 1 hard, $1.04; No. 2 hard, 99½c ; No. 3 hard, 92 to 93c ; No. 3 regular, 86, 87c ; No. 2 regular, 75, 76c.

BARLEY.

Present reports tell of a quiet market generally. At Buffalo, No. 1 Canada sold at 88½c ; fancy western has ranged 68c ; No. 2 Western, 66c ; Michigan, 60 to 67c. Oswego : No. 1 Canada quoted 92c ; No. 2 extra, 89c. Canada : No. 1, 53c f.o.b.; No. 2, 50c ; No. 3, 43c.

OATS.

Interest in oats has been enhanced by the reports of the magnificent crop in Prince Edward Island. Farmers there have struck it lucky, and are in great glee. The shipments to date have been as follows : To sister provinces, 350,000 bushels ; to Great Britain, 542,000 bushels ; to the United States, 51 bushels. Prices for exports have ranged about 41 cents a bushel.

In Ontario little has been doing in oats. Sales in Toronto on the track have been made at 33 to 33½c ; white, west 29c and mixed 28c. In the Montreal markets sales of car lots of Quebec oats are reported at 34½ to 35c per 34lbs.

PEAS.

The market is easy and dull. Prices have shown no material change throughout the month. Sellers are in the majority. 59 and 60c is being asked and 58c offered. Fair sales.

RYE.

Dullness hangs over no cereal to the same extent as rye. No activity whatever is shown. Local buyers have all they want and to spare, and exporters hold their offers down to 86c, which does not induce sales. Sellers east are asking 88c f.o.b.

FLOUR.

The Canadian flour market throughout this month has been free of any remarkable activity. Millers are concerned over the action of Newfoundland, and as the season for receiving orders draws near, they are becoming anxious of the outcome. As pointed out in the editorial columns of this month's MILLER, unless the trouble is overcome speedily, Canadian millers will almost certainly lose the benefit of this season's trade.

Mr. Plewes, on behalf of the syndicate of Canadian millers, reached Great Britian at a time when the market was very much depressed. He is commencing, however, to feel his bearings, and there seems to be no doubt but that Canadian millers will reap an advantage in export trade from having their own representative located in the British markets.

There is no occasion to complain of local trade ; our mills generally are doing a fair trade.

The Northwestern Miller writes rather discouragingly of American flour trade at the present time. Minneapolis can claim no large demand, " bids usually varying so low for patents as to preclude their acceptance. What demand there is comes largely from Glasgow and Aberdeen." St. Louis reports : " Export business is very dull, and beyond a few shipments to Great Britian and Cuban business, the foreign business is slight."

A dispatch from New York gives a roseate view of the anticipated increase in the American flour trade with the West Indies, as a result of the reciprocity arrangements with that country. Shippers say that orders are already large, and the result of the new law will be a great surprise to some people a month from now. The agents for the New York and Porto Rico Steamship Company report that 300,000 bags have been ordered for export from Baltimore alone, which is 75 per cent. of the whole export from the United States for the last year to both Porto Rico and Cuban.

Whether American flour is going to obtain the hold in France that some millers have expected is, perhaps, a question. The London (Eng.) Daily News of recent date says : French millers are becoming alarmed at the threatened invasion of France by American flour, and although the quantity which has been imported so far is a mere bagatelle, the French Government has been petitioned to raise the duty on flour, which is at present 8f. per 100 kilos. The result is that the Senate, with unusual despatch, has adopted the proposal to increase the duty to 10f. per 100 kilos on flour imported showing a yield of only 60 or 70 per cent. from the wheat, and of 12f. on flour, of which the yield is 60 per cent. and less. The object is to increase the tax on the finer grades of flour of which the imports principally consist, and of which flour, of course a smaller percentage, is obtained from the grain.

The following table shows the stocks of flour at the points named on the dates given :

	Jan. 1,'92. bbls.	Dec. 1, '91. bbls.	Jan. 1, '91. bbls.
Philadelphia	109,500	95,000	150,000
New York	178,800	140,700	273,000
Chicago	82,780	63,063	65,540
St. Louis	70,130	57,780	87,400
Toledo	12,800	6,000	4,000
Baltimore	83,832	73,998	74,006
Detroit	12,100	7,000	15,000
Boston	96,169	109,700	119,599
Milwaukee	110,900	70,490	123,700
Duluth	15,173	14,998	2,099
Total	772,184	638,639	914,744

Quotations for flour at the time of writing are as follows : Toronto : $4.10 to $4.20 for straight rollers ; $4 to $4.05 for extras. Montreal : Patent spring $5 to $5.35 ; patent winter, $5 to $5.25 ; straight roller, $4.65 to $4.75 ; extra, $4.30 to $4.35 ; superfine, $4 to $4.10 ; city strong bakers', $5 to $5.10 ; strong bakers', $4.80 to $4.90. Guelph : No. 1 super, $4.25 to $4.60 patent. Brantford : No. 1 super, $4.40 to $5. Ottawa : No. 1 super, $4.25 to $4.50. Halifax : Hungarian patent Manitoban, $5.80 to $5.90 ; Manitoba strong bakers', $5.50 to $5.70 ; Canadian pastry. $5.80 to $6 ; 75 per cent. roller patent, $5.30 to $5.40 ; 80 per cent. do., $5.20 to $5.30 ; 90 per cent. do. $4.90 to $5 ; straight roller patent, $4.75 to $4.85 ; superior extra patent, $4.60 to $4.70 ; extra, $4.20 to $4.30. Quebec : Strong bakers' are held at $4.90 to $5 ; patents, $4.75 to $4.90 ; straight rollers are quoted at from $4.50 to $4.60, with sales at $2.12½ to $2.17½ in bags ; extras, $4.25 to $4.35 ; superfines, $3.50 to $3.90.

OUR NEW DRESS.

IT would be shabby treatment to come before our readers in the new dress we have donned to-day and not tell them who made the stylish and well fitting garments. The MILLER must give Miller & Richards, type founders, of this city, credit for this handsome outfit. The body of the paper is printed from their extra hard metal Scotch type, which is known to printers in this country from the Atlantic to the Pacific. Those who are not practical printers will admire what in technical parlance printers speak of as a clean, open face type, while the printer himself knows the durability and perfectness that comes with this type, when it bears the well-known letters "M. & R." The new and handsome types that are shown in the advertising pages of the MILLER, and that give to these pages an attractiveness that will certainly be admired by our advertisers, comes also from the same firm, for as a matter of fact th re is nothing necessary to the complete outfit of a printing office, small or large, that is beyond their capacity to furnish. Established as the leading type founders of Great Britain for upwards of a century, they have for many years been ably represented in Canada by Mr. R. L. Patterson, one of the most popular men among the printing fraternity throughout the wide Dominion.

ROSENGOOD, Man., can now boast of a flour mill.

KILLARNEY, Man., offers a bonus of $4,000 for a mill.

JOHN TODD, flour dealer, Toronto, has assigned to James Parkyn.

JACQUES & DOUGLAS is the name of a new grain firm at Ottawa, Ont.

HENNING'S flour mill at Goderich, Ont., was destroyed by fire. Loss $6,000.

DOW & WILL have leased the flour and oatmeal mill at Pilot Mound, Man.

PORT ARTHUR, Ont,, offers a bonus to the man who will establish a mill within its borders.

THE mill of J. P. Frieson & Sons, at Gretna, Man., has been increased to 125 barrels capacity.

MARTIN & WHEELOCKS large flouring mills, Ottawa, Ont., are now operated entirely by electricity.

WHAT was known as Bowlby's grist mill, near Rockford, Ont., and owned by Thomas Thoms, was destroyed by fire.

GRAIN-BUYING points are being established along the line of the new Northwest Central Railway, the first 50 miles of which is now completed.

A PORTABLE grist mill has been purchased by the farmers of Cardstow, Lethbridge district, Alberta. It has a capacity of a barrel and a half per hour.

F. A. FAIRCHILD, a well-known dealer in farm implements, of Winnipeg, Man., says that threshing in the Province will be continued until June next.

THE old McKinnon mills at Alton, Ont., owned by McCutcheon & Co., are being remodeled to a 75-barrel mill. The contract is in the hands of E. P. Care, of Thistleton, Ont.

A BOARD of trade has been organized in Oakville, Ont., with a membership of 24. It includes the prominent business men of the place, and is starting under favorable auspices.

THE new grist mill at Millwood, Man., under the management of Herbert Webster, is doing a good business. Mitchel's elevator at same place is completed and receiving large quantities of grain.

HAMIOTA, Man., has got a big boom on as the result of making it the terminal town of the G.N.C.W. Railway. It will be an important milling centre, and a new grain warehouse has just been completed for N. Bawlf, of Rapid City. Grain is being marketed at the rate of 1,000 to 1,500 bushels per day.

W. H. CODE & Co., of Seaforth, Ont., are showing samples of a load of 58 bushels of wheat which was delivered at the mills by Thomas Stinson. The wheat is of the Michigan Amber variety, and tested 66 pounds to the bushel. Mr. Stinson has recently delivered several loads of wheat to the Code mills, which has tested over 65 lbs. to the bushel.

A SAD accident occurred at the mill at Keewatin, Ont. There is a cylinder on the outside of the mill on which a rope is wound used for pulling up cars on the switch for loading and unloading, and a Swede named Hans Fisher got caught on the rope and was wound in on the cylinder before it could be stopped. The body was cut in two and the head badly crushed, killing him instantly.

CHIEF Engineer Trudeau, of the Canadian railways and canals department, has submitted to the government a proposal to make the locks of the Sault Ste. Marie canal (Canadian side) 900 feet long by 60 feet wide, in order to allow three barges to follow each other through at one time, instead of the proposed lock of four boats, two abreast. It is probable that the proposal will be approved.

THE Globe's Montreal correspondent says that the grain merchants of that city believe the adoption of unduly high standards of grain by the board of examiners was not the result of error in judgment on the part of western members of the board, but that it was in pursuance of a policy adopted deliberately from year to year to place them and commission men at a disadvantage as compared with western millers.

The British Columbia Mills, Timber and Trading Co. recently got out three monster sticks of timber for the Montreal Harbor Commissioners, 36 inches square and 60 feet long. This is a duplicate of an order executed in 1890 for the timbers for a dredge which the Montreal Harbor Commissioners were then building. They are now building another dredge, and the massive British Columbia spruce received in 1890 was so satisfactory that they want some more of the same kind.

The Lake of the Woods Milling Co. has announced that it will increase the capacity of its Keewatin mill to 2,000 bbls. A new mill of 600 bbls. capacity will also be built at Portage la Prairie. The company has now a line of 25 elevators.

ANGUS BROTHERS, formerly of Brussels, Ont., and now of Suburn, Man., have been doing some big threshing. They started work at 12 o'clock and by 4 o'clock same day they had eighteen hundred bushels threshed. They then moved the machine one mile, set it again and threshed 350 bushels by six o'clock. Some idea of the amount of grain turned out can be formed when we say that it took four teams and eight men to take the grain away.

UP to a week ago 1,050 cars of grain had arrived at Halifax, N.S., for the elevator, to be shipped by Furness line and Donaldson line steamers to England. Cars are loaded with oats, peas and barley. Each car contains from 24,000 to 50,000 pounds and averaging each car at 34,000 pounds will give a total weight of 35,700,000 pounds to be elevated and re-shipped by the steamers. It is estimated that there are about 800 cars of grain besides those that have already arrived at Halifax, on the road in the different stations and sidings between here and Moncton. The railway authorities are taxed to their utmost to keep steamers going and find room for the cars.

AT the last general meeting of the Rimouski County council a resolution was unanimously passed strongly urging on the Federal Government the necessity of erecting a deep water pier at Father Point light for the service of the 600 ocean steamers that annually call at that point. The Montreal and Quebec Boards of Trade and the Montreal Corn Exchange, the lower St. Lawrence pilots, and all the steamship companies have sent in petitions endorsing the request, and as the works are considered by all the shipping and trade circles as being urgently required, it is concluded that the Government will at once take measures to comply with the reasonable demand.

WHEAT from Brandon, Man., is being shipped to England from Victoria, B.C., by the Pacific Ocean and round Cape Horn to Liverpool. This is the first experiment of the kind ever tried. It is scarcely probable that wheat can be profitably landed from the centre of Canada to the western ocean, and thence carried to Liverpool at the same price that it can be carried direct, but that it can be occasionally taken at all by this route with advantage to the shippers, will be worth demonstrating. The great Peace River country, the best wheat land now unoccupied, is nearer by a thousand miles to Victoria than to Montreal; and it may be, should the Hudson Bay railway prove impracticable, that the product of that country will some day find access to the markets of the world through British Columbia ports.

SOON after the reciprocity arrangements between the United States and Spain went into effect complaints were made by Canadian merchants that the authorities in Cuba and Porto Rico were refusing to allow Canadian products into these islands at the same rate of duty as imposed upon United States products of similar kinds, and also that they were imposing an export duty on sugars destined for Canada. The minister of Finance made immediate representations to the Colonial Secretary in London, and very soon thereafter received assurances that Canadian products would receive in all respects more favoured nation treatment, and that the Cuban and Port Rican authorities had been so instructed. Late despatches received bear out these assurances, so that up to July 1, 1892, Canadian trade stands in Cuba and Port Rico on precisely the same basis as that of the United States.

AT the annual meeting of the shareholders of the Ogilvie Milling Company held at Winnipeg, Man., the following directors were elected for the ensuing year: W. W. Ogilvie, Shirley Ogilvie, A. T. Ogilvie and F. W. Thompson. At a meeting of the directors held subsequently W. W. Ogilvie was elected president; Shirley Ogilvie, vice-president; F. W. Thompson, general manager; W. A. Black, secretary. It is understood that the business for the past year was of a highly satisfactoty nature. Mr. W. W. Ogilvie, president of the company, said that previous to coming to Winnipeg he had asked the company's manager to secure reports from outside shipping points in the Northwest as to the amount of grain that had been marketed so far. These reports had been received and compiled and showed that 38½ per cent. of the estimated crop of last year had left the farmers' hands. In speaking of the quality of the wheat, Mr. Ogilvie said that judging by past experience he thought that the wheat now in stack should remain so until spring in order to allow it to get thoroughly dried out and cured. Grain left in stack until spring would certainly turn out much better than anything of recent threshing, notwithstanding opinions expressed to the contrary. Mr. Ogilvie also stated that it was probable that the Manitoba crop of 1891 would exceed the Government estimate. Considerable improvement will be made in the Ogilvie Company's properties here.

LATE reports say that Russia is drawing both wheat and barley from Morocco.

AN English despatch says that Russia has entered into arrangements with the Black Sea and Danube Steamship Company for shipment of Roumanian wheat to Russia.

THE shipments of rye from America, Canada, Roumania, and Turkey from Sept. 1 to about Dec. 15, amount to 7,200,000 bus., against 16,000,000 for the same time a year ago, the latter figures including shipments from Russia.

E. M. VAN TASSEL'S big grain elevator and warehouse, corner of Thirteenth-avenue and west Eleventh-street, New York, were destroyed by fire involving a loss of about $200,000. Two workmen perished in the flames.

LOWENTHAL, LIVINGSTON & Co., grain dealers, of San Francisco, Cal., have filed a petition in insolvency. Liabilities $308,000; assets $163,000. Speculation in charters of wheat-carrying vessels was the chief cause of the insolvency.

JOHN BUTLER, manager of the Midland (Ia.) Elevator Co., was arrested at Chicago, Jan. 2, charged with embezzling $4,000 from his company. The money was secured on drafts and collections. Butler was once wealthy, but lost his fortune several years ago.

A BANANA flour mill is to be built in Minneapolis if the parties interested in the scheme can raise the necessary capital. The fruit will be put through machinery resembling that used in the manufacture of wheat flour. Who will he the first to invent a banana peeler?

A despatch from Dantzic, Germany, says: The officials of this port have appealed to Chancellor Caprivi to extend the new grain rates to grain that was bonded for transit during the passage of the treaties in the reichstag. There are 33,000 tons of grain held in bond at Dantzic.

THE French barley crop is officially estimated at 9,258,000 quarters, against 5,966,000 quarters in 1890, and the oats crop at 35,054,000 quarters, against 30,400,000 quarters. The larger increase in barley and oats is due to a large area of wheat re-plowed and given to these two cereals.

Numerous cargoes of wheat are going to Havre, France, from America. Eight ships arrived from San Francisco, Dec. 29, with cargoes amounting in all to 337,000 sacks wheat. Steamers from New York brought 167,000 bus. The docks there are quite blocked up, while further heavy shipments are expected.

MR. J. CLARK, representing an English syndicate, has bought twenty-three or all but six of the flour mills in Utah. The transaction involves $1,800,000 for the plant and $350,000 for the stock now on hand. The company proposes to erect a number of elevators and expect to control the entire wheat crop of the territory. The mills purchased by Mr. Clark have a capacity of 2,024 barrels of flour per day.

A SHORT distance above St. Paul, on the Mississippi River; another great water power has lately been made available by such extensive improvements as will secure a head or fall of twenty-five feet. The magnificent dam, extensive canal, convenient and roomy mill sites, give nearly as much power as possessed by Minneapolis, while everything being on solid rock, and an immense reservoir of deep, still water extending for miles above the dam, gives many superior advantages found at no other point.

AT a meeting of the Rye Flour Millers' Association at New York Jan. 6, the price of Rye flour delivered at New York was fixed at from $5.25 to $5.35 per bbl. Before the Albany meeting last month the price of rye flour dropped from $5.60 per bbl. to $4.90, and there was no corresponding decrease in the price of rye. Since, rye has gone up. When the price of rye goes up or down, the secretary will take a mail vote and upon the vote of three-fourths of the members the price of rye flour will he changed.

IT is stated that the British shipbuilding returns for November are, with one exception, the heaviest for the year, and half the aggregate tonnage representing sailing vessels. From Scotch building yards there were launched 34 vessels of 44,231 tons, of which one-half were steamers, and 14, measuring 22,074 tons were sailing vessels. The total tonnage for the past eleven months amounts to 332,412, as compared with 369,326 in the previous year. Clyde builders launched during the month thirty vessels, aggregating 35,431 tons.

THE

CANADIAN MILLER

AND GRAIN TRADE REVIEW

TORONTO, January, 1892

TO CANADIAN EXPORT MILLERS:

We have been engaged for some months in the work of compiling a list of the buyers of flour, oatmeal, cornmeal, etc., throughout the provinces of the Dominion, Newfoundland, the West Indies and Europe, with the object of assisting in the work undertaken by the Dominion Millers' Association in its efforts to find a more extended market for the products of Canadian mills. The list referred to is, we think, about as complete as it can be made, and includes the names of nearly 750 reliable firms engaged in handling these products extensively.

Our intention is to introduce a special department in the CANADIAN MILLER calculated to interest this particular section of the trade, and also to place a copy of each issue of our journal in the hands of every firm included in this special list. By this means the MILLER will reach not only the manufacturer of flour but the buyer also.

On the strength of this undertaking we solicit from all millers who have facilities for doing a shipping trade the privilege of inserting their announcements in this journal in the belief that the returns therefrom will fully justify the expenditure. As it will be impossible for us to personally interview all whom we hope to see represented in this way it is hoped that all millers wishing to increase their export trade will at once communicate with us regarding rates and any other information required.

Wishing the millers generally a prosperous and happy New Year,

The Publisher.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 12th of each month to insure insertion in the following issue.

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The President in moving the adoption of the report, February, 1891, said :—

"I have, however, much pleasure in drawing your attention to the fact that the commission income alone, as you will see by referring to the Revenue Account, **exceeded the total claims for fire losses, a record, I believe, unprecedented in the history of any other fire insurance company either here or in the mother country.**

The assurers with this Company, since it was established in 1885, have already saved on the current exacted rates, upwards of **forty-five thousand dollars.**

As no canvassers are employed, dealing directly with the assured, those desiring to avail themselves of the advantages offered by this Company will please address:

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Choice Brands Hungarian Process Flour : : :

Wheat Germ Meal, Cornmeal

Roller, Standard and Granulated Oatmeal

POT BARLEY, SPLIT PEAS, etc., etc.

MILLERS . . should send in their announcements for the February MILLER not later than the 5th prox.

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SUPERIOR CALENDER-FINISHED

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Light Cotton Bags for 98 lbs. Flour, Local Trade . . . . . .

Medium and Heavy Cotton Sacks for 140 lbs. Flour, Export Trade

Original Designs for Brands Prepared Free . . . Printing in Beautiful Bright Colors at Lowest Prices

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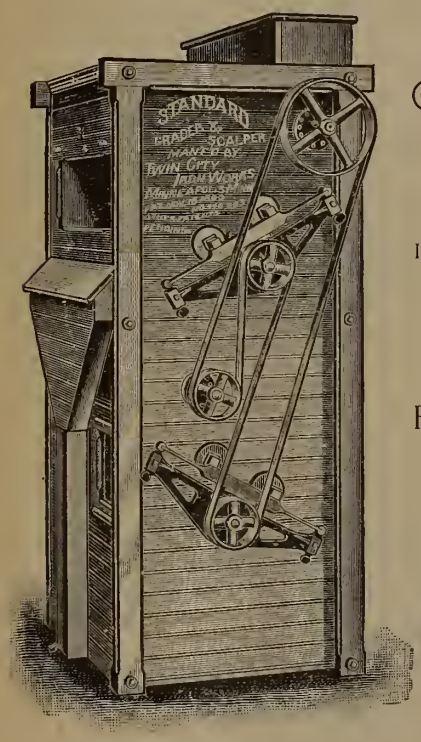

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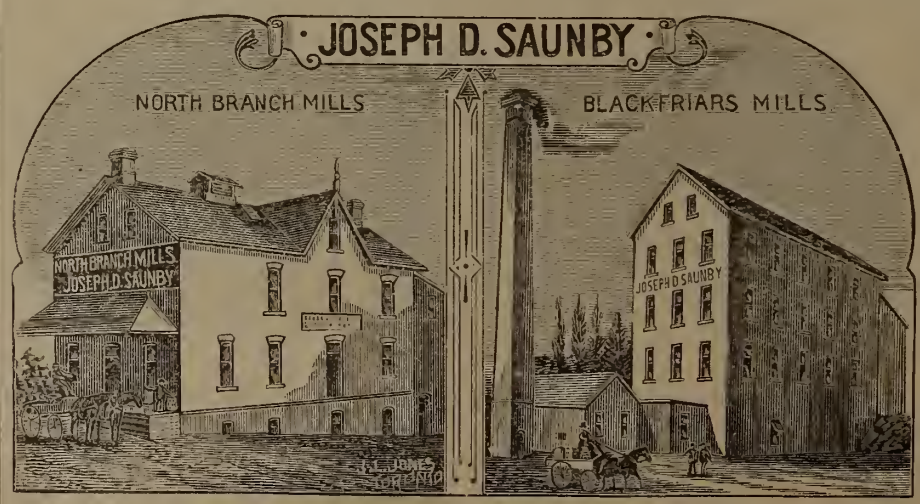

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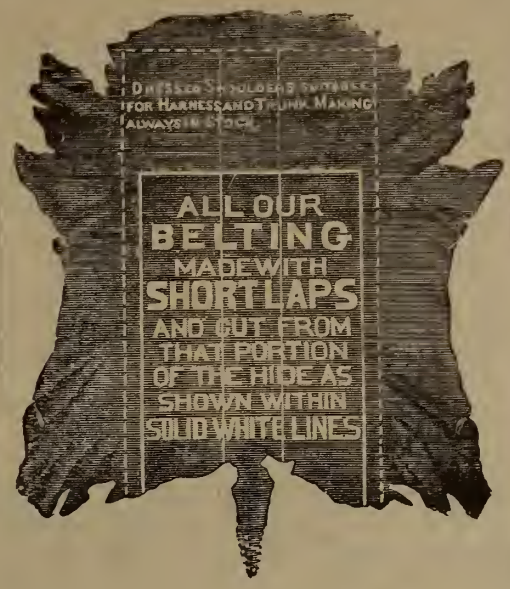

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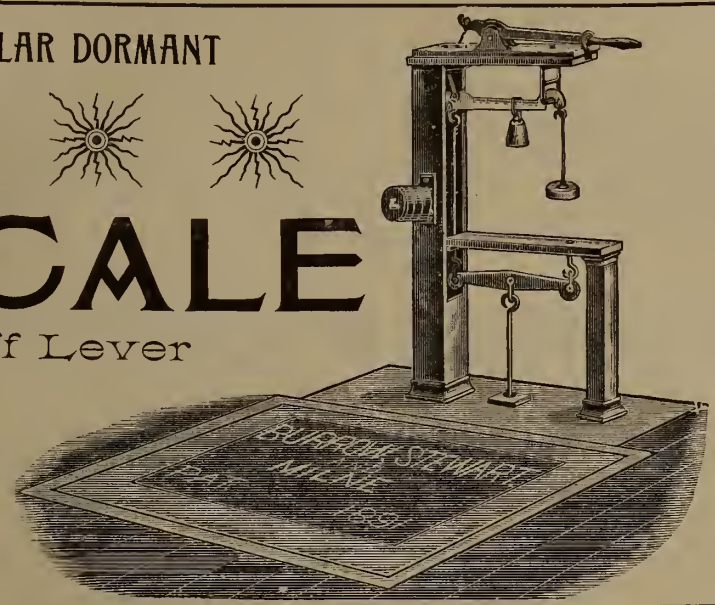

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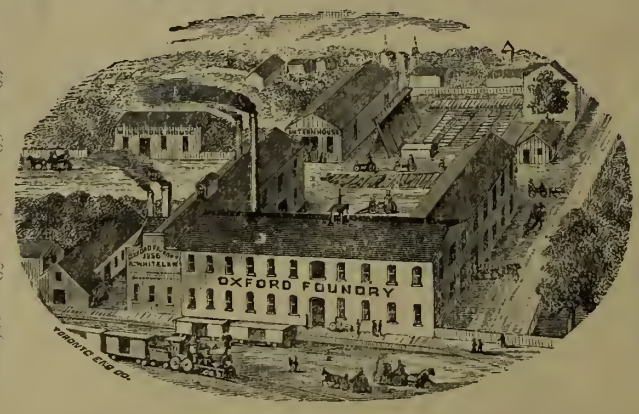
Yours truly,
JNO. MARTYN & CO.

. . . . . .



WINGHAM, ONT., April 1st, 1891

R. WHITELAW.

DEAR SIR,—For systematic arrangement, durability of machinery, economy of power, quality of flour, finish and clean up, the mill you built for us is equal to anything in Ontario.

Wishing you success, we remain yours, etc.,
HUTTON & CARR.

McGREGOR, MAN., Oct. 30th, 1890

R. WHITELAW,

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Yours truly, GEO. ROGERS.

R. WHITELAW : : WOODSTOCK, ONT.

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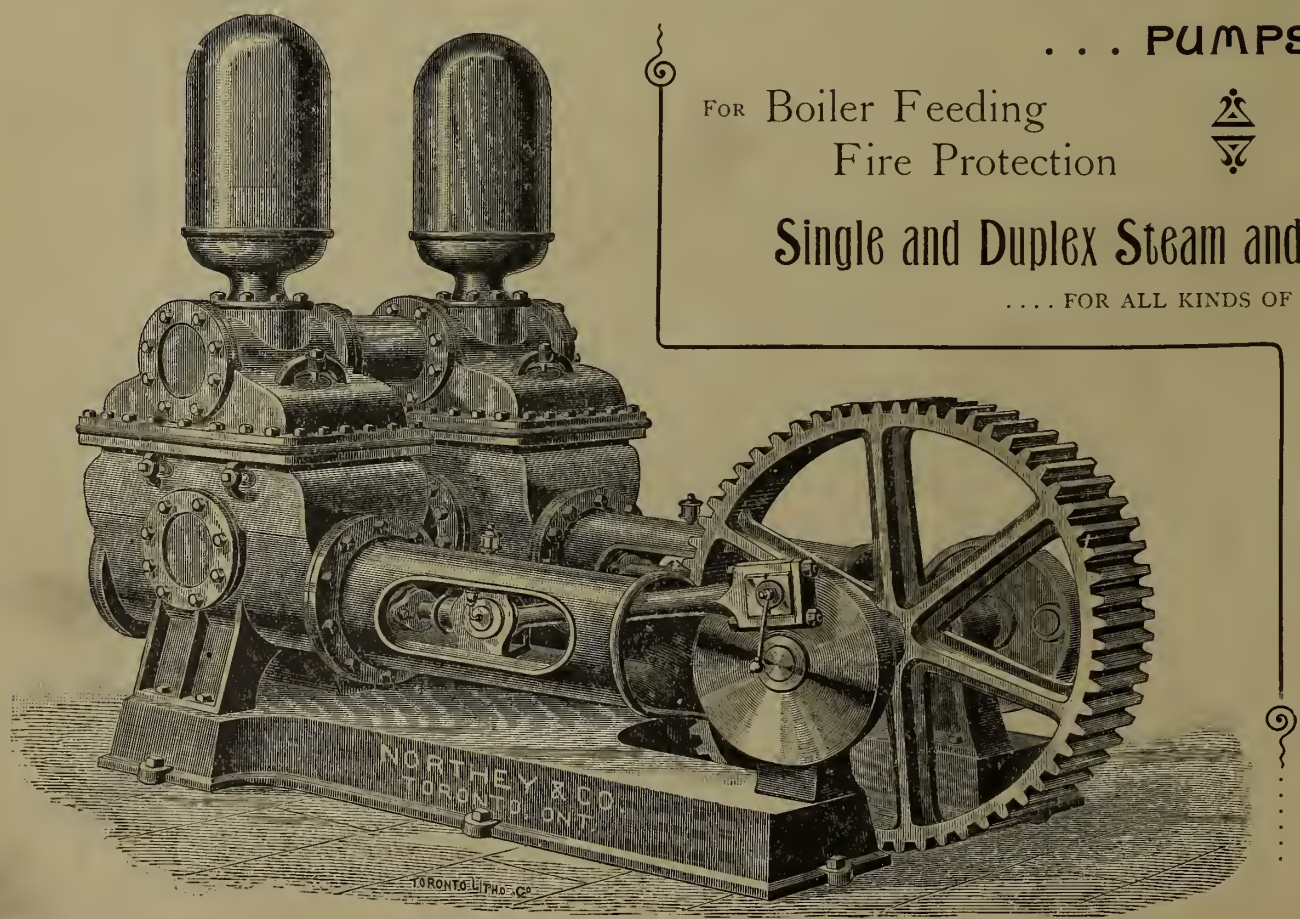

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW

W. J. KRAMER TO ROMTO

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OLD SERIES, VOL. X. } NUMBER 2.
NEW SERIES, VOL. II. }

TORONTO, ONT., FEBRUARY, 1892

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IN USE BY EIGHT LEADING GOVERNMENTS

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Yours truly, H. G. TORREY.

NOTE—Mr. Torrey is U. S. Assayer, and has been in U. S. Mint service at New York for 30 years.

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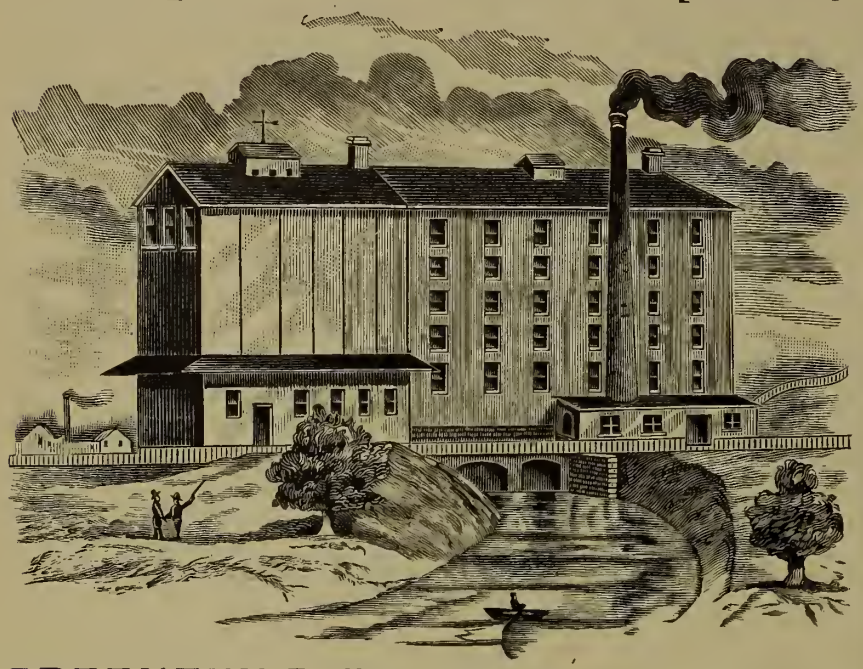

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THE CANADIAN MILLER

Old Series, Vol. X. } Number 2.
New Series, Vol. II. }

TORONTO, ONT., FEBRUARY, 1892

{ Terms, $1,00 Per Year
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MILLING IN RUSSIA.

SECOND ARTICLE—UPPER VOLGA DISTRICT.

THE industry in this centre is from days gone by, especially in Tver and Ribensk, somewhat later in Kazan, and last of all in Kostroma and Nijni-Novgorod. The last named place has now taken the first position as to production and quality, not only in this centre but also in the Volga provinces generally. The positions of the different points of this centre are not all alike as, for instance, in Tver we see a falling off, while in Nijni-Novgorod, on the other hand, there is a considerable increase.

In 1884 the development in this centre reached a normal production (in all the mills) of about 29,000,000 poods (36 lbs. each), while in 1887 the production was 25,000,000 poods, a reduction of nearly 15 per cent. This difference would be considerably more if we exclude Nijni-Novgorod, where the production is about 10,000,000 poods. The principal cause of this, according to the reports of millers, is the falling off in consumption and demand, especially of the lower sorts or qualities. According to verified reports of Jaroslaff millers, a considerable stock of lower qualities of flour made in 1885 were still remaining unsold in 1887. The mills are now mostly equipped with roller machinery and all the latest improvements. Motive power in the old mills is all water, but many of the reconstructed and new mills are combined water and steam. In Nijni-Novgorod, where the larger mills have been built, the bulk have steam power only. In this district, as already mentioned, the grain is principally supplied from the lower Volga, though a trial was made at Tver in 1887 from wheat grown in the Donskoi basin. This trial was satisfactory, but for some reason has not been repeated. The wheat is usually bought by the millers themselves, or through their employees at the storage ports, on the lower Volga, generally in August and September of the current year's harvest, and is brought up the river just before the close of navigation.

The large millers buy for cash, but their smaller neighbors in Ribensk purchase at second hand, taking from six to twelve month's credit. The wheat used in these mills is all from the Volga valley, viz. : Perrerod (a hard spring) ; Rusak and Saxonka (mixed and red spring) ; but the proportion of mixing varies very much according to quality of grain and requirements of markets.

Flour produced in this centre goes exclusively to interior markets, and nowhere abroad, with the exception of Ninji-Novgorod, which exports a small quantity of the best grades.

The transit tariff naturally plays a very important part in the industry. Every miller, without exception, complains of the excessive railway rates, which are one of the principal causes of the present unsatisfactory state of the industry.

The cost of manufacture of flour in Russia seems a very difficult question to arrive at, and in many cases, it is said, the millers are very reluctant to give any figures. In other cases they themselves are not sufficiently well up in accounts to arrive at any satisfactory estimate. For instance, some millers took into consideration interest on capital and repairs, while others left these items out. To arrive, therefore, at any satisfactory normal figure was most difficult, and we are only able to give the cost in a few points of each centre, and those only from figures furnished by the millers themselves, to verify which is virtually impossible. As regards cost of power, water is naturally less than that of steam ; against which, however, must be taken in many cases, the cost of haulage over long distances. In these cases the steam-power mills have often the advantage over water, as they have been constructed in the centres where land carriage would be comparatively small. Those mills which have to haul their wheat over a distance of 20 versts (between 13 and 14 miles) cannot carry on business with any profit. As far as could be judged the cost of production in this centre was from 85 to 150 kopecks (viz. ; about 56 to 75 cents) per chetwert of 10 poods (say 360 lbs.) of wheat.

It may be noted that in the majority of cases the miller can only turn over his capital about once a year, as credit ranges from three to five months after delivery. Wheat bought in August for cash is put on the market as flour about October, owing to slowness of transit, so that it is April or May of the year following before he can recoup himself.

It was only at the mill of Messrs. Romanoff, in Kazan, that any details could be obtained as to cost of production. This mill is situated 17 versts from the River Port of Kazan, on the Volga. The outturn is 600,000 poods per annum, and cost is calculated on 1,200 poods; hauling, 46 roubles 10 kopecks ; rent, insurance, taxes, etc., 22 roubles 91 kopecks ; lighting, heating, etc., nine roubles 57 kopecks ; labour, 18 roubles 76 kopecks ; administration, 19 roubles 20 kopecks, while nothing was allowed for repairs and interest on capital.

It may be noted here that as a rule five per cent. is generally charged in Russia on capital, before making any allowance for profit, which makes this omission somewhat unusual. Generally, as far as could be ascertained, the cost of production in the Kazan mills range from 125 to 140 kopecks by steam power, and from 85 to 98 kopecks by water power (per chetwert of 360 lbs.), the turnover as before named being practically only once in twelve months.

THE CHARACTER OF FLOUR.

THE character of flour is closely identified with that of color, from the bakers' point of view. It is nearly as important as that of strength. writes Prof. Wien in the British and Foreign Confectioner. One of the characteristics of flour produced by the modern methods in well equipped mills is, that it is of uniform quality throughout the year, and the other characteristic in a good flour is that when a handful is taken from a sack it will be noticed that the particles will run off the hand like fine sand. If the flour bought by the baker is found to be otherwise than of a uniform quality, it is best to close the account with such miller. However, if the flour is greasy and lies close together, the reason is because it has not been properly milled, and it can generally be put down to the fact that too much pressure has been employed in grinding by the careless handling of the machines, or forcing the capacity of the mill machinery above what it is capable of executing well, which means the loss of strength owing to the complete alteration in the structure of the flour particles, or to put it in plainer words, it means destroying the resisting power of the tissues of the gluten, but not altering the quantity of gluten. In Hungary and America the aim of the millers, as a body, is to reduce the wheat to flour in such a manner as to interfere as little as possible with the structure of the particles of the wheat berry, and only breaking it up sufficiently to remove all the bran and fibrous matter that discolors the flour, and that tends to produce only an inferior flavor in the bread.

It is not so much the degree of fineness of the particles that attention should be directed to, but the uniform size of the particles—a matter of the greatest importance. Although flour should somewhat resemble fine or coarse sand, it should not be like the two sorts mixed together, as particles of an unequal size have the effect of minimizing the power of absorbing water. In fact, flour resembling coarse and fine sand mixed together is a loss to the baker, as he is unable to make the water penetrate to each particle by reason of the fine and coarse particles of flour forming a regular close mass, so that the dough produced is anything but a delicate spongy structure. The object to be considered in bread making is how to produce from certain kinds of flour a loaf that will be pleasing to the eye, agreeable to the taste, nutritious and easy of digestion, and for this purpose the flour used must consist of particles of the same size, and as near as possible the same in their structure, both in hardness and shape, in order that the baker will have the dough all ripe at a given time, and not one portion fit for the oven, another portion with particles not sufficiently developed, and other parts of the dough already spent.

To ascertain if the flour contains particles of a uniform size and hardness, three small hand sieves, about ten inches in diameter, covered with Swiss bolting silk, should be used, and each sieve should be of a different mesh. In practice it would be found that one sieve with a silk cover with 84 threads to the inch, another with 106 threads to the inch, and the third sieve with a silk with 124 threads to the inch, would be useful. When the sample of flour has been sifted through the three sieves—which would be made to fit tightly, one on the top of the other—the particles remaining on the three sieves, and the material that has passed through the last sieve can easily be compared with each other. When away from the bakehouse another simple method, which is much in vogue in France and in some parts of Germany, is to rake a pinch of flour from the sample and throw it on to a piece of black cloth, or, if the person testing the sample is wearing a black coat, throw it on the sleeve of the coat. The size, shape and character of the various particles adhering to the cloth will be at once seen, as well as the extent of loose starch granules in the sample.

In the operation of washing the flour until only the gluten remained wrapped up in the silk, the starch passed off with the water into the basin. The starch, which is composed of 38.55 carbon, 6.13 hydrogen, and 55.32 oxygen, will settle at the bottom of the basin, and when the water has been removed by means of a small syphon, can be dried. Pure wheat starch is a white, pulverulent substance, without smell or taste, and if boiled in very diluted sulphuric acid, would turn into sugar. One hundred pounds of starch afford 110 pounds of sugar. Starch is easily dissolved in boiling water, and if exposed to a temperature of 600° or 700° F., becomes brown, swells up and exhales a peculiar odor, and is no longer insoluble in water. The production of the blue color by the action of iodine, is a distinguishing property of starch. By a careful study of the form that the starch cells take under the microscope, it is not only possible to tell what country the flour is imported from, but when a mixture of wheats from different countries is milled into a flour in one mill, the form of the starch cells in the sample of flour will enable an expert to say what wheats have been used to make the flour.

ANOTHER GREAT SEASON.

"THE export grain trade," said Wm. T. Lockhart, M.P.P., grain dealer, of Newcastle, Ont., "is dull just now. Last fall was a splendid season for Canadian grain shippers. The old country market was open to large purchases on account of the threatened scarcity in the European output. The scarcity did not come, and in consequence the European market is overstocked at present. This state of affairs cannot continue, and I expect if our winter wheat turns out all right another great season for the Canadian farmer and grain man. A great deal depends, however, on the supply of grain which comes to England from India and Australia."

VIEWS AND INTERVIEWS.

Wise Counsel.

The president of the Winnipeg Board of Trade warns the farmers of Manitoba against biting off more than they can chew. They are falling into the mistake made, usually, wherever land is plentiful, of endeavouring to work more land than they can properly cultivate, and he draws attention to the known fact that much loss was sustained last season because the grain could not be all harvested for want of men or machines to handle it.

The Porridge Pot Assailed.

Oatmeal porridge is proving a subject of discussion among English physicians. Recently Dr. Herchell of London, Eng., in a book on "Indigestion," stated that "the purgative influence of oatmeal porridge, which arises from the scrubbing and irritating action of the silicious material of the oatmeal upon the lower intestines, is gained at the expense of subsequent constipation, when the mucous membranes become accustomed to the abnormal irritation, and the stimulus of normal food is no longer sufficient to excite the peristaltic movement." The Millers' Gazette, of London, replies to this assault on the Scotchman's favorite diet by pointing to the robust health of the Highlander as a living proof that the doctor is wrong, at the same time admitting that it is not possible to remove what is known as the silicious matter of the meal. A United States milling journal, whose editor evidently don't go much on oatmeal, puts in a rejoinder by questioning whether it is not in spite of his use of oatmeal that the Highlander enjoys his robust health. Even the Highlander dies, we are told, and "those of them who have not yet died of oatmeal dissipation and constipation are, in temper and general make-up, not attractive advertisements of the value of oatmeal as a food."

Who Pays the Duty?

The question is an ever-debatable one, and in the abstract the balance of argument will sometimes be made to lean to one side and again to the other. It is, however, when some one gets squeezed in his own purse that, regardless of political leanings, he will come out with a very bold piece of logic from the practical side. We have in the following story, as told by Mr. C. G. Cody, an implement agent in Victoria County, an illustration of the farmer who has been experiencing the untoward influence of the McKinley Bill on the price of barley. Mr. Cody says: "A few days ago I had occasion to renew a note amounting to ninety dollars for a farmer in this county (Victoria) as part payment for a binder that he bought off me a year or so ago, and of course had to charge him the usual rate of interest. In talking the matter over with him I found that he sold this year 350 bushels of barley and got 45c. a bushel for it, or $157.50 for the 350 bushels. I had the last week's barley market report, as published in the Empire, in the office, which showed a difference of 40c. per bushel between Canada barley sold in Toronto and the same grade of the very same barley as sold in Oswego. We figured it up and the 30 cent duty on each bushel going to Oswego amounted to just $105 clear loss to my farmer friend on his 350 bushels, or enough to pay his note in full and have $15 to the good, which he could have given to his wife for her share."

Canada's Canals.

A notable visitor to the city during the month of January was the veteran seaman, Capt. Alexander MacDougall, of Duluth, inventor of the whaleback, and actively identified with the big ship-building concern, the American Steel Barge Company. Mr. MacDougall talked freely to a reporter of our canal system which is an important factor in whaleback schemes. "The completion of your canal system," said the Captain, "is what your navigation interests most need at present. There now remains only the Beauharnois canals to be finished, and the Dominion will have a complete chain of waterways to the sea. You will see a revolution in the shipping trade then. The canals at Montreal won't be able to accommodate the vessels waiting to go through. Over this route in summer time most of the trade from the west and northwest will be carried. Instead of going by rail to Boston and New York it will be shipped from Milwaukee and Chicago to Montreal. There the lake vessel will transfer its freight to the ocean steamer to be carried across the Atlantic. The tonnage of vessels in Canada will increase from the 1,000,000 it is now to 40,000,000 or 50,000,000. The Dominion needs this increase badly. My friend Mr. Marks, of Port Arthur, who ought to know, tells me that only one freight vessel is under construction at present in the whole of Canada. I should say complete and enlarge your canal system at all costs. Speaking of his own vessel, Capt. MacDougall says: "Three years ago we launched the first whaleback. To-day there are 25 in actual commission. Twenty are on the inland lakes, four on the Atlantic and one on the Pacific. I have returned recently from both the Pacific and Atlantic coasts. One whaleback has left Boston for Yucatan, and to-day I got a telegram telling me of the departure of the Pacific coaster from Seattle with a cargo of coal for Santiago. A shipyard is now in course of completion on the Puget Sound for the construction of whalebacks. We have more than we can do at our yards in West Superior. Eight vessels are on the stocks now six of these being steamers, not one with a length of less than 322 feet. We intend building two more especially for the St. Lawrence canal trade."

THE EVOLUTION OF THE MILL.

FOLLOWING is an abstract of an article on mills, written by Mr. J. H. Cooper for the "Iconographic Encyclopædia of the Arts and Sciences," which work is a translation, revision and enlargement of the German "Bilder-Atlas", a well known book of reference. Mr. Cooper says: "Of the various mechanical processes by which the condition of natural products is changed, that of pulverizing is the simplest; and the earliest human contrivances were doubtless of the nature of mills for crushing and grinding fruits and seeds. The term 'mill' was originally restricted to denote the various forms of apparatus by which grain is ground into flour and meal, and the equivalent word in the Latin and its allied languages still retains this signification (Lat. 'mola'; It. 'mulino'; Sp. 'molino'; Fr. 'moulin'). In modern English usage the term is applied to nearly all machines and combinations of machinery, which consists chiefly of wheel-work and its co-ordinate appliances, by which raw materials are changed into new forms and conditions; and the mill generally takes its name either from the principle of its action, as 'rolling mill' and 'sawmill' or from the materials upon which it acts, as 'cotton mill,' 'corn mill' and the like. . . . From the earliest historic periods to the present the edible grains have been ground between two stones. The original grinding implement was a fixed stone, in a hollowed-out portion of which the grain was pounded with a boulder in the hand. If such a crude device is worthy the name of 'mill', then corn mills have the highest antiquity. Dr. Schliemann in his 'Ilios' makes mention of certain rudely-cut, nearly globular stone instruments which he found in great number in all the four lower prehistoric cities. They are of basaltic lava, granite, quartz, diorite, porphyry, or other hard and gritty stone, and in rare instances of silex. Similar implements are found in the cave-dwellings of France and are numerous in the most ancient Swiss lake-habitations. In the opinion of Prof. Lindenschmitt, these implements, which are of the simplest kind, were the most ancient millstones and were employed for bruising the grain on the slabs of sandstone which abound in the lake-habitations. . . . At Wauwyl, in the canton of Lucerne many corn crushers have been found in the villages of the Stone Age; these are balls of hard stone two or three inches in diameter. Round corn bruisers were also found in the debris of the Stone Age of Egypt. Stone balls for bruising corn are utilized by the Indians of the Yosemite Valley, in California. Their squaws pounded acorns with round stone mullers on a granite rock, whose flat surface is worn into holes by the operation. These stationary mortars ('pot-holes') are abundant in other parts of the State. Dr. Schliemann, quoting Helbig, remarks that 'tradition has ever preserved a trace of the fact that there existed no proper apparatus for grinding at the time of the oldest Italic development, inasmuch as the 'mola versatilis,' the most perfect apparatus, whose upper part was turned by a handle above the lower one, was, according to Varro, an invention of the Volsinians. This tradition presupposed an older epoch, during which people utilized other more imperfect means, possibly with two stones, such as were used by the ancient inhabitants of the 'terramare villages for pounding the grains.' In Biblical history evidences are not wanting of the early existence of means for reducing the cereals to powder, and we may conclude that, when Abraham hastened into the presence of Sarah, saying, 'Make ready quickly three measures of fine meal, knead it and make cakes' (Genesis xviii. 6), there must have existed some sort of mill for rapidly grinding grain into flour, and to meet the demand for 'fine meal' it is evident that there was used a more efficient implement than the mill described above.

"Dr. C. C. Abbott, in his elaborate article on the 'Stone Age in New Jersey,' says: 'The Indian women, upon whom fell all the drudgery of aboriginal life, reduced the hard kernals of maise to coarse meal by pounding them in hollows of rocks, natural or artificial, with globular pebbles, or with long cylindrical stones, carefully chipped for the purpose and known as pestles. Wooden mortars and pestles were also used. In the northern section of the State, where rocks 'in situ' abound, deep basins hollowed in immovable rocks are very numerous, which is evidence that in the rocky section of the State the site of a village was chosen with reference to the 'mill,' while in the southern part, where rocks suitable for mills do not exist, stones weighing twenty or more pounds are found, which were brought from a distance; a receptacle was first chipped on one side, which gradually by use became both deep and smoothly worn.' The stationary mortars are generally larger in diameter and of a greater depth than the portable examples, and could be used only with the long pestles. The vast majority of these stationary mortars are natural 'pot-holes,' possibly in some cases deepened intentionally, or by long use in crushing corn. Such a pot-hole used as a mortar formerly existed in a large glacial boulder in Center street, Trenton, N. J. When excavations were made to remove this rock, several broken pestles were brought to light, besides a stone axe and several dozens of spear-heads and arrow-heads of various sizes. It is said that the present site of Trenton was the headquarters of a great chief; here the small portable corn-mills are abundant, and they were probably used solely in reducing grain to meal. Hereabouts have been found hundreds of pestles, many of which may be seen in private collections. They are cylindrical water-worn pebbles, such as abound in the bed of the Delaware river at that place.

The mortar (mortarium) used by the Romans was formed of a stone or other solid material hollowed into the shape of a shallow basin, in which ingredients were kneaded and mixed with a small pestle worked by one hand and in a roundabout direction. The 'pilum' was a large and powerful instrument for braying materials in a deep mortar. It was held in both hands, and the action employed when using it was that of pounding by repeated blows. The Roman 'pistor' literally means 'one who pounds corn in a mortar,' that is a miller; because in very early times, before the invention of mills for grinding, the corn was brayed into flour with a very heavy pestle. Subsequently the same word signified 'a baker,' because bakers ground the flour with which they made their bread. Pliny says that, in the estimation of some, bread made of broken grain is superior to that more finely ground in the better constructed mills; hence the inference that throughout the greater part of Italy grain for bread was pounded in a mortar with an iron-shod pestle. In course of time the mortar was ridged and the pestle notched, forming a machine which had a grating action on the grain. Dr. Tschudi describes four of the Peruvian mortars, which were carved in porphyry, basalt and granite.

Mortars, mostly made of hard sandstone, from five to 24 inches in diameter and from 2 to 12 inches in depth, of rude workmanship and without ornament, have been found in great numbers in graves in Santa Barbara, Cal. Specimens of the larger kind, found in graves at La Patera, are symmetrical in shape and have within and without a well-marked projecting rim, which served both to strengthen the utensil and to prevent the escape of the grain while being pounded. When broken, they were mended with asphaltum, which was also used to fasten ornaments to the rim. Many of the pestles found are simply smooth elongated boulders, while others show

a shaping for a purpose, the collar on the smaller end suggesting a provision for suspension, or to facilitate handling. . . . Hunter, in his 'Manners and Customs of Indian Tribes,' informs us that in some Indian villages visited by him there were employed for pounding corn one or two large stone mortars, which were public property. They were placed in the central part of the village, and were used in rotation by the different families. In the course of time the cavity of the stationary stone became deepened, and a handle was attached to the ball, whereby there resulted the mortar and pestle ; so, again when the upper stone was enlarged and provided with a central hole and handle, by which the stone was rotated on a peg or pivot in the lower stone, there was produced the quern or hand-mill, which is the germ of the modern flour mill.

Wheel mills consist of a single pair of stones of similar form, with fitting surfaces, one of which, the upper stone or runner, is caused to revolve in near contact with the other, the nether or bed-stone, the grain being ground between the two while passing in one direction from the centre to the circumference. By both ancient and modern writers the term 'corn mill' has been applied to the mortar-and-pestle mill as well as to a mill composed of a pair of stones, one of which is fixed while the other revolves. In connection with the earliest Scripture references to the 'mill' (Numbers xi. 8,) there is mention of the 'mortar,' both of which implements were employed for reducing manna to powder. We have no description of the form of the mill in which the manna was 'ground', but we may presume that revolving mill-stones were employed. At an earlier date the 'King of Salem brought forth bread and wine' (Genesis xiv. 18), from which we may infer that mills for grinding grain and machines for expressing the juice of grapes were employed in the earliest times. The Etruscans, 500 B. C., scored or furrowed the inside of their mortars, grooved the bottoms radially, gave to them a more cylindrical form and roughened the lower end of the pestle. The pestle was kept in the central position by an iron spike projecting from its lower end and entering a hole in the centre of the mortar, and it was rotated on its vertical axis by means of a handle projecting laterally."

GREAT DAM IN AUSTRALIA.

OFFICIAL details of the great dam at Beetaloo, Australia, correct some of the previously published statements and figures, and the immensity of such a piece of engineering work may well challenge a comparison with anything of the kind in that part of the world. The structure is of concrete, 110 feet high from the bed of the creek to the top of the dam, and 580 feet long, being curved in the plan of a radius of about 1,400 feet ; the width of the top is fourteen feet, the profile of the section being designed in accordance with Rankine's rules, and the width of the section at the foundation 110 feet; the crest of the bywash, which is 200 feet wide, is five feet below the crest of the dam; and the reservoir behind the dam at its full one and one-fourth miles long, with an average width of eight chains. The capacity, under these conditions, is 800,000,000 gallons, for the supply of a district covering an area of 1,700 square miles, including eight separate townships, etc. The quantity of concrete used was 60,000 cubic yards, the net time occupied in construction being about two and one-half years. Special machinery was used for mixing the concrete and depositing it in place, and the whole work is regarded as a most creditable achievement.

FRANCE AND HER MILLING INTERESTS.

THE enormous exportations of American flour this year so alarmed the millers of France that they succeeded in getting duties placed on imports of foreign flour ranging according to its qualities from $1.25 per 220 pounds to $2.00. On and after 1st June these duties will be raised up to $1.60 to $2.50. The highest rate is aimed especially at the patent flours of the States. The French industry thus protected is the manufacture of about 46 million sacks of flour yearly by native millers. This will be giving America a dose of McKinley physic over which she will pull a wry face.

CANADIAN MILLER, $1.00 a year. Subscribe now.

DEATH OF THOMAS GOLDIE.

THERE will be few, who knew him, who will not realize in the death of Thomas Goldie, President of the Dominion Millers' Association, the full forcefulness of the oft-quoted saying, "In the midst of life we are in death." It seems only as yesterday since we were greeted with the hearty hand-shake and genial words of welcome that revealed to everyone the lovable character of the deceased. But it is too true that Thomas Goldie is dead. He had only been indisposed about ten days. Commencing with an ordinary cold, the latter part of January, his illness assumed the prevalent form of la grippe; some days before his death pneumonia supervened, and at one a.m., Thursday, February 4th, the lamp of life went out.

Thomas Goldie was the eldest son of Mr. and Mrs. James Goldie, who had come out from Scotland to the States, where, during a brief residence in Patterson, N.J., he was born in 1850. Ten years later the family moved to Guelph from Utica, N.Y., and Mr. James Goldie built the Speedvale mills, which he afterwards sold to the late John Pipe, and largely built the well-known People's mills, of Guelph, as they now stand. His education was obtained principally at the public and grammar schools of the Royal City, supplemented by a course in college at Montreal, Que., followed by a special course at a business college in Poughkeepsie, N.Y.

THE LATE THOMAS GOLDIE.

With this equipment he joined his father and brothers in the mill, there displaying those splendid business talents that have made the name of Goldie, the miller, known throughout the entire Dominion. He was active in anything he put his hand to. For the past four years he was president of the Liberal Conservative Association, of South Wellington, and for years before this he was perhaps the most energetic worker in their ranks. He was a prominent member of the Provincial Conservative Association, to use the words of a political opponent, "one of the ablest and most trusted of the provincial leaders, one of the men on whom depended the foundation work." He had the faculty in politics, as in all his other work, public or private, of enthusing others, and securing results where a man lacking his wonderful personal magnetism would frequently fail. It is feared that the cold which led to his short but fatal illness was contracted whilst working for Mr. Henderson in the contest in Halton.

He took an active part in all movements helping to build up the city of Guelph and its institutions. He was for years a member of the School Board and of the City Council, and in the elections of January, 1891, he was elected mayor by more than 500 majority over his opponent. In January of this year he was re-elected by acclamation.

He was a great lover of athletic sports. He was one of the directors of the old Maple Leaf baseball club, and for several years has been president of the Ontario Cricket Association, cricket being his favorite sport. He was generally present at international matches, and accompanied the Canadian eleven to Philadelphia last year. He was also very fond of fishing.

He has been connected for many years with Knox church and took a most active interest in its affairs, being chairman of the Board of Managers and one of the trustees of the church, and occupied the chair at the last annual meeting. He was a charter member of Guelph Lodge, No. 163, A.O.U.W., and was in attendance only one or two meetings ago.

He was married in Nova Scotia in 1877, to Miss Emma Jane, daughter of the late John Mitchell, and sister to City Clerk Mitchell and Mr. Robert Mitchell, barrister, Guelph. Besides his wife, he leaves five children, two boys and three girls, all of tender years.

At the annual meeting of the Dominion Millers' Association in August of last year, he was unanimously elected president, and at once threw himself into the work of the Association with his well-known energy and ability. He entered enthusiastically into every project proposed for the advancement of the milling interests of the country. President Goldie was no figurehead. His prominent position in public affairs gave him a large influence in quarters where it was desirable to exercise this for the benefit of Canadian millers, and he was ready to interview statesman or banker, or any other representative class, if in so doing the ends desired could be achieved. It is as president of the Dominion Millers' Association that he will be most missed by readers of the CANADIAN MILLER.

The strong hold that he had on the hearts of the people of this country was shown in the immense numbers that gathered in the Royal City on Saturday, the 6th inst., to pay their last sad respects to the memory of the deceased. It is estimated that no fewer than 12,000 people viewed the remains of Thomas Goldie on that occasion. They came from the towns and cities, generally, of the province, nearly 300 citizens of Toronto, consisting largely of members of the Board of Trade and Ontario Cricket Association, going by special car from the city.

The chief mourners were the three brothers of the deceased, his sons Roswell and Lion; David and George Goldie, Ayr; Charles Turnbull, Galt; David Owen, Fred. Owen, Utica, N.Y.; Wm. Griffin, John Goldie, Galt; Dr. John Caven and Dr. Wm. Caven, Toronto; and Richard and Robert Mitchell, Guelph.

Resolutions of sympathy to the wife and family of the deceased were tendered from the many different bodies, public and private, with which he had been identified.

With all the work that he succeeded in crowding into a life, cut off at the early age of 42 years, and the tribute that is due his memory for the energy and self-denial that characterized the prosecution of this work, yet it is as a whole-souled, big-hearted, generous-acting friend that the remembrance of Thomas Goldie will be kept fresh in the minds of thousands.

A DUKE IN DISGUISE.

THE Grand Duke Sergius, governor of Moscow, Russia, disguised himself recently as a moujik, in order to discover the truth about certain allegations concerning the difficulty of buying small quantities of bread. He presented himself at a baker's shop and inquired the price of bread per pound, and was told 3½ copecks. He asked to be served with three copecks' worth, saying that it was all the money he possessed. The baker refused to sell less than a pound, but he insisted on his right to buy as much as the money he offered was worth. Believing he had to do with a peasant, the baker commenced abusing him and bade him leave the premises. This the Grand Duke declined to do, whereupon the baker called in the police, who, after severely hustling the pretended peasant, finally ejected him into the street, and proceeded to draw up a warrant prior to taking him in charge. When the document was written, the prisoner was invited to sign, which he did with his full name and title of governor, after which he threw off his disguise and revealed himself to the astonished crowd, all of whom recognized him at once. The same evening three police officials implicated in the affair committed suicide, and, with the closing of four baker's shops, the incident terminated.

THE Canadian MILLER AND GRAIN TRADE REVIEW

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

TRADE WITH THE WEST INDIES.

THE West Indies, as a field for Canadian trade and enterprise, is receiving increased attention from business men here and also those of the Indies. The want of proper shipping facilities, enabling Canada to compete successfully for this trade with other countries, has probably been the largest difficulty we have had to encounter. The favor with which Canadian products, especially flour, have been received in Jamaica, has been referred to so often by the Canadian press that it becomes a case of unnecessary re-iteration to more than mention the fact in a disscussion of the subject. Our products are all right. The important matter is to place them in the Indies at a price to compete with the products of other markets.

A recent visitor to this country has been Mr. James F. Spurr, representing the Pickford & Black West Indian Steamship Company. He has a thorough acquaintance with, and is seeking to develop, direct trade between Canada and the West Indies. The company are owners of two first-class steamers, "Taymouth Castle" and "Duart Castle," which form a regular line between Halifax, Bermuda and the West Indies. As the business grows other steamships are likely to be placed on the route. Mr. Spurr's aim is to encourage shipments over this line, in place of through the United States, the way a large portion of our business goes now; and this would seem the natural thing for Canadian merchants and manufacturers to do.

A good point is made by a Mr. W. T. Halstead, of Kingston, Jamaica, in a letter to the Globe recently. He says: "If Canada really wants to secure a West India trade there is only one way to do it—she must come right down here and take it. Americans do undoubtedly possess the advantages of proximity and splendid steam communication, but the great reason why they are more successful here than Canadians lies in the fact that American capitalists never think of waiting for their Government to take any measures, but come right down here and start a business. Then, when they have established a business of some proportions, is the time for the Government to step in and protect that trade."

He goes on to show that Canadians who have established themselves on the islands are doing fully as well as Americans. They are to be found engaged in various lines of business—ready-made clothing, carriages, furniture, etc.,—while nearly all the fish consumed in Jamaica are imported from Canada and Newfoundland.

On the question of Canadian flour Mr. Halstead writes: "The bread trade in Jamaica is all but monopolized by one firm, the members of which have made fortunes out of the business. This firm uses on an average 1,000 barrels of flour a week. The freight per barrel from New York to Kingston is 40 cents, the duty 8s ($2), and steam bread sells at six cents per pound loaf. The new tariff law, just passed by the Jamaica Legislature, does not provide for a reduction of duty on flour, but it does provide for a reduction in the duty on wheat. Hereafter wheat will be dutiable at the rate of sixpence per bushel. Now here, in my opinion, is a good opportunity for the investment of Canadian capital. Let a company come down here, build mills, import their wheat from Canada, make their own flour, and put a good, wholesome bread on the market, such as Adam Brown used to bake at the Canadian court at the Jamaica exhibition, and the company is an assured success. Everyone here buys their bread and everyone would buy a great deal more were it only cheaper and of a better quality."

This correspondent is particularly sanguine of the field for flour products. A stop need not be made with bread. There is not on the whole of the island an establishment where buns, biscuits, pastry or confectionery of any kind can be regularly bought, and at reasonable prices; and besides doing a big Jamaica trade, a milling company could, by purchasing a steamer, soon build up a large export trade.

These are the views of a friend of Canada who is on the spot. He admits, as we have already pointed out, that the 'miserable steam communication' is a difficulty in the way of such an undertaking, but it does seem that in this matter our Government must do something practical to overcome this difficulty, and do it soon. The rest may be safely left to Canadian enterprise.

ENGLISH MILLING MATTERS.

IT is quite a live question to what extent flour milling is likely to develop in European countries during the years to come—say within another decade. Great Britain is making conspicuous progress in milling operations, and other countries, even Russia, are not without growing ambitions in that direction.

A review of the British milling industry for 1891 has recently appeared in the Millers' Gazette, of London, Eng. The novelties in milling machinery have not been very numerous, our English dusties being satisfied, apparently, to give the innovations of previous years a further test before trying other new things. A new dustless purifier on the gravity principle has been introduced; a new sieve dustless purifier, and two or three specialties in dressing machinery about complete the list.

Larger quantities of wheat were brought from India and Persia to the United Kingdom in 1891 than in 1890, the figures standing thus: "1891, over 4,000,000 quarters of wheat, 1890, 2,500,000 quarters. The custom of stoning and washing wheats has been largely adopted by English millers; and English milling engineers, as a result of concentrated thought on the subject, have produced during the year a number of important improvements on the old system.

The milling capacity of the United Kingdom has been, and is being increased, despite the fact that foreign flours find an easy access to British markets. The following table shows the progress in this respect for the past five years:—

	Flour cons'd in U.K. Sacks of 280 lb.	Imported Flour, Sacks	Home prod'n, Sacks
1887	31,800,000	7,323,000	24,577,000
1888	31,950,000	6,765,000	25,185,000
1889	32,100,000	5,880,000	26,120,000
1890	32,250,000	6,310,000	25,940,000
1891	32,400,000	6,500,000	25,900,000

The markets for the year were free from violent fluctuations, excepting probably in the month of December.

English millers are amalgamating and combining just as their brethren are doing on this side of the water, several important syndicates developing in 1891.

To the Canadian miller, who is looking abroad for the disposal of a good proportion of his yearly output, the situation in Britain, with its possibilities and probabilities, should not be barren of interest. We can hardly agree with some of our milling friends that the next few years will see so large a development in the milling industry in Britain, that our flour will no longer find a market there. That day, it seems to us, is a long way in the future. We have advantages and opportunities of pursuing milling in this newer country, with the wheat at our doors, that England does not possess, nor can possess. The foreign field is under any circumstances of immense dimensions, and much bread stuffs are needed to feed its millions. Canada will have her share in this trade for some time to come. The Canadian miller will at the same time intelligently watch what our relatives and friends in other lands are doing, and will yet do, in milling lines.

AN IMMEDIATE QUESTION.

IN the last issue of the MILLER we wrote plainly on the Newfoundland flour trade. The question is one that cannot be allowed to rest. Whilst all who are concerned in the growth of flour milling in this country will leave no stone unturned to open out and extend this trade in the West Indies and other fields, we must make sure to hold the fields already secured; and this is especially the case with Newfoundland. The trade there has been made; it is sure of further growth; and no effort can be spared, by any one or other of the interests concerned, in seeing that immediate action in the direction indicated is taken.

The following circular letter from Stewart Munn & Co., shipping and commission merchants, of Montreal, Que., emphasises in vigorous terms what has already been said by the MILLER:—

"The time is now approaching when Newfoundland buyers will contract for the spring delivery of large quantities of all grades of flour. Montreal being the receiving point for at least three-fourths of all the flour shipped to Newfoundland, we deem it expedient to advise all Canadian millers how matters now stand between Canada and Newfoundland.

"We are exceedingly sorry to see that the difficulties between Canada and that country over the fishery question have brought about a differential tax on all Canadian flours entering Newfoundland. This tax is $1.05 per barrel, while all United States flours are admitted on the former tariff—30 cents per barrel. This difference against us of 75 cents per barrel is simply prohibitory for the Canadian trade.

"We hear of no prospective settlement of the question, and consider it of the utmost importance that pressure should be brought to bear on our Government to induce them to endeavor to arrive at some understanding with our sister colony.

"Newfoundland requires every year 300,000 to 350,000 barrels of flour, and we are certain that there will be no difficulty in Canadian millers securing the bulk of this trade if we are placed on equal terms with our American competitors. For the first time for several years the prices of Canadian flours are on a level with, or a little below, those of American millers, and it would show a lack of enterprise (which we are certain is not the case) on the part of Canadian millers if they allow such a good opportunity to pass for disposing of part of a good harvest.

"Too much time has been wasted already, and the settlement seems to be farther off than ever. It therefore seems to be imperative that, in addition to our Board of Trade, the Dominion Millers' Association should at once move energetically in the matter. It is only by prompt action that we can hope to retain even a share of a trade which is so important to the Dominion.

"The matter is now before the Montreal Board of Trade, and that body will, we have no doubt, be glad to receive the co-operation of all other trade associations in pressing the importance of the question upon the Dominion Government."

WIMAN ON BREAD.

ERASTUS WIMAN is nothing if not versatile. He says many good things among the many things he does say, and if everyone does not agree with him, as an old Canadian, though his home and his dollars are largely elsewhere, we are ready to give him at least an attentive and courteous hearing.

The February North American Review is out with an article from Mr. Wiman's pen: "The Flour of the Future." The discussion is on scientific lines. There can be no doubt, our reviewer thinks, that the bread of to-day, as compared with that of our forefathers, is whiter and better looking. It may be lighter, thanks to the influence of various baking powders; but Mr. Wiman questions if it is more wholesome, nutritious and digestible. We are generous in the use of science in almost all kinds of manufactures in this age; everybody consumes bread, and yet, according to Mr. Wiman, in the making of beer ten times as much science is employed as in the preparation of the staff of life. In Germany the man who would adulterate beer is sent to prison, but he may adulterate bread with impunity, so long as he does not actually introduce poisonous sub-

stances. This is in Germany. There will be those who will doubt how far the spirit of science enters into much of the beer brewed in this country; another spirit, that is not of science, does enter into it.

The burden of Mr. Wiman's article is an attack on the fashion of the times, which demands nice-looking things, even in bread, heedless of the physical consequences. He would lay the charge of this to the miller also, who has adapted his milling process to meet the request of the age, on the principle, we suppose, that razors are made to sell. A prominent English physician is quoted, who has reversed the old joke that the doctors are in league with the undertakers; it would appear rather that the millers and bakers were in the doctors' pay.

With the present milling process the conundrum is whether the best elements of the wheat berry are not sacrificed to the effort to securing a light-colored flour. 'It is well known that the germ of the wheat contains a high percentage of ash and phosphoric acid, and also fat: indeed, the germ contains almost all the fat of the grain, and it therefore becomes one of the most important elements of food. The slight discoloration of the flour, which is caused by its presence, has, however, condemned it, and in the modern system of dressing white flour, it is discarded. For much the same reason the cellulose and the cerealine, which are part of the bran, are also inadvisedly cast out.'

Fashion is irrepressible. Dyspeptics may grow and flourish like the pines of the forest, or, if the simile is more natural, they may droop and die as does the early spring flower; it matters not to fashion. She will give no place to bran foods nearer than the hennery or rabbit hutch.

Mr. Wiman warms up as he gets into this phase of the question. The dyspeptic lives not only for to-day. The loss of mental and physical vitality will be confined not alone to the nervous, ill-natured, churlish and discontented individual to whom life is hardly worth the living. These weaknesses will be transplanted in coming generations; the iniquities of the fathers shall follow the children even unto the third and fourth generation. The miller and flour merchants come in for their full share of the maledictions of the well-known apostle of reciprocity. The panacea to these evils is the whole-wheat meal, the manufacture of which was commenced in London, Eng., in 1890, and the success of which is declared to be very remarkable.

But the old saying is wonderfully true in regard to this whole question of nutritious and non-nutritious foods, that doctors do differ. We are not so sure that they will not differ with Mr. Wiman. Probably all laymen will not hold with the Wiman view. In the meantime, despite a fair-sized army of dyspeptics, who keep the doctors and druggists fairly busy, there are some very decent specimens of white bread eaters, who do not look as if they were losing flesh or vitality—eating three square meals a day of this non-nutritious food.

THE WATER COURSES ACT.

THE case of Ellis vs. Clemens, in reference to which a resolution was passed at the last meeting of the Dominion Millers' Association, was before Justice Armour at Osgoode Hall on the 12th inst., on an appeal from the judgment of Street, J., in favour of the plaintiff. The particulars of the case are these. Ellis is the owner of part of lot 10, in the second concession in the lower block of Waterloo, through which a small natural stream of water flows. Upon this stream, a short distance above the boundary of the plaintiff's land, the defendant's predecessors in title had, prior to the year 1855, erected a dam and built a mill run by the power of the stream. The plaintiff complained that in the year 1883, and from thence continually down to 21st March, 1888, one Aaron Clemens (the defendant's father), then the owner of the mill, penned the water back by his dam and raceways and allowed it from time to time to escape in such small quantities that in the winter it became frozen in layers solidly from the bottom of the bed of the stream on the plaintiff's land to the top, and that the water, in the spring, being unable to escape through the channel by reason of the solid ice which filled it, spread over the plaintiff's land and destroyed his crops; and that the defendant, since his father's death in 1888, carried on the same milling business and dealt with the water in the same way as his father had done, and caused similar damage; and the plaintiff claimed damages and a perpetual injunction. The defendant admitted that he and his predecessors in title had, since 1842, maintained the dam and mill, and claimed a prescriptive right to do so; he alleged that the use of the water by him and his predecessors had been lawful and reasonable and for a beneficial purpose, and he denied that any damage was caused to the defendant. The action was tried before Street, J., at Guelph, and he held that the defendant and his predecessor, by discontinuing the use of the water during hard frosts, although at a loss to themselves, might have prevented the damage complained of by the plaintiff, and, not having so discontinued, though requested to do so by the plaintiff, that they were making an unreasonable use of the water and were liable for the damage done. He also held that the mere fact that the defendant and his predecessors had maintained their dam and mill in the same position for upwards of forty years, and had during all that time used the water as the necessity of their business required, did not give the defendant a right to use the water to the prejudice of the plaintiff; that the defendant could not insist that he had gained a prescriptive right to injure the plaintiff without proving that he and his predecessors had for twenty years been making an unreasonable use of the water to the injury of the plaintiff.

By resolution of the Dominion Millers' Association a committee was appointed to prepare a draft of such amendments to the Streams and Water Courses Act as would prevent the occurrence of other troubles similar to that of the case now in court. The time is at hand for dealing with the question and no doubt the committee if they have not already moved in the matter will do so at once.

DISHONEST GRAIN MEN.

IT will be remembered that the Dominion Millers' Association at their meeting in December last entered a vigorous protest against the custom of certain millers of shipping flour short in weight, and a resolution was passed enjoining the officers of the Inland Revenue department to look sharply after any such cases. The step was timely and wise, for no body of business men can afford to have their integrity called into question, because of the dishonesty of individual members. And no legitimate form of punishment is too severe to levy on the guilty ones in cases of the kind.

Within the month the grain men of the Board of Trade have been forced to meet a similar class of rascality in their ranks, and they have acted with like promptness and determination. The case was brought before the Board by President Hugh N. Baird, through a letter received by him from Norris & Carruthers, which carries its own explanation:—

It has come to our knowledge that some dishonest grain dealers have been buying Manitoba frosted wheat and mixing some with good Ontario wheat and shipping it to exporters as Ontario wheat. We think this is a matter which the grain trade should take some active measures to stamp out, as not only does it deteriorate the value of the actual shipment, but through this mixing an entire cargo is liable to be rejected by buyers on the other side.

We have recently had a case in point at Forest where we bought ten cars of red winter wheat and shipped it to Portland. The shipper now admits that there was something over 500 bushels of Manitoba frosted wheat mixed in with this lot.

We enclose you a letter we have received from John Burton, G.F.A. of the G.T.R., in reference to this matter.

Here is the letter which Mr. Burton had officially forwarded to Toronto:—

I am advised by the Montreal Warehousing Co., here (Montreal) that the several cars of wheat shipped to you from Forest as red winter wheat, which was billed to order of Standard Bank, Liverpool, via Portland, are some of them mixed with frosted wheat. On the face of it this would appear to be a deliberate attempt to defraud, and if the mixing had not been detected on inspection here it might have caused serious loss to the carriers, to the warehousing company and to your firm. I do not know what view you will take of the matter, but I think it would be well to have legal advice with the view of bringing the consigner to justice.

The question was followed up by Mr. James Carruthers in a resolution that unanimously voiced the sentiments of the whole trade. The resolution reads:—

"Whereas, it has been reported by letter or by verbal representation that some shippers of grain are in the habit of bringing in inferior grades of wheat (frosted and otherwise damaged) and mixing the same with good sound Ontario wheat, much to the detriment and injury of the trade of Ontario, it is hereby resolved:—

"That this, the grain section of the Board of Trade, emphatically condemns this practice as being dishonest and fraudulent, and will take steps to prosecute and punish all parties guilty thereof, and further, that the public press be requested to give the utmost publicity both to those letters and to this resolution."

Mr. Carruthers in moving the resolution pointed out very plainly that unless immediate steps were taken to stamp out the evil our wheat would get into bad repute and the trade of the whole country would suffer.

The name of the culprit in this particular case was not divulged, though the call was vigorous for the publishing of his name. If what has been done should fail to secure a remedy there should be no hesitation in a future case of publicly holding up the guilty one to the scorn and contempt of the whole mercantile community.

EDITORIAL NOTES.

THIS is a pat way of putting a matter that not unfrequently comes before many millers: "The miller who began to work in a mill at the age of 15 years, and milled at one place 10 years, at another 20, another 15, another 25, another 9, another 11, and has been 5 years at his last place, until he ages up to 110 years old, and is "a young man yet," is entitled to just as good right for the truth of his claim as the one who calls himself a miller on three years experience."

THE Grand Trunk have notified the Board of Trade that the following rates will apply on grain in car loads, minimum 30,000 pounds or over to Montreal for export, exclusive of all terminals: North and West—16 cents per 100 pounds; west—14 cents 100 pounds; east of Toronto and Midland division—12½ cents per 100 pounds. The grain will be forwarded to Montreal at published tariff prices, and reduced by rebate upon proof of exportation. Loss by fire and water at owner's risk, The C.P.R. will also presumably adopt the same freight system.

A SUCCESSFUL Darlington farmer remarked to a local scribe the other day that for many years he had sold his grain as soon as he got it ready to market. He is one of the men who does not take any stock in the "hold your wheat" policy, and after many years experience in an opposite direction he is satisfied that the argument is profitably on his side. This season he sold in the fall when 95 cents and $1.00 was being paid, where current figures are only in the vicinity of 85 cents. We are inclined to think our friend is a pretty level-headed fellow.

THE death of Thomas Goldie, of Guelph, to which fitting reference is made in another column, renders vacant the office of president of the Dominion Millers' Association. A number of important questions are before the millers of the country at the present time, which makes it desirable that the position should not remain vacant for any length of time, and that in selecting a successor to the late president that the choice fall on a man rightly fitted to follow up the work that had been pursued with energy and success by Mr. Goldie. We do not know of any reason why a general meeting of the association should not be held at an early day.

WHAT is doubtless a correct statement of the grain yield of Manitoba last season is found in the annual address of President Stephen Nairn, of the Winnipeg Board of Trade. The actual acreage under crop was 916,600 acres in wheat, from which was taken 23,190,000 bushels of that grain; 305,600 acres, yielding 14,000,000 bushels oats, and 89,800 acres in barley, yielding 3,200,000 bushels; a total of 1,312,000 acres in these three cereals, and a total yield of 40,300,000 bushels in all. The average product of wheat was thus 25.31 bushels per acre; of oats about 48 bushels, and of barley 35.63 bushels per acre. May we not excuse the people of the Prairie Province if they enthuse a good deal over the possibilities of their country. The possibilities are there and are great. The fact is one that may be taken note of by Mr. C. Wood Davis in his effort to find a near quarter to level up the shortage of grain yields, which is to take place shortly on his side of the lines.

EVEN in this matter-of-fact age the belief in premonitions of future events is strong in the minds of many. I would not like to say that there is nothing in this peculiar mental condition, and just now, at any rate, I am not going to enter into a philosophical discussion of the matter. These presentiments, we know, will assert themselves, and where one person may treat them with perfect nonchalance, others cannot throw them aside so easily. Whatever may be the views of my readers the following incident in the life of the late Thomas Goldie will, in the light of after events, be read with interest. It is told by the collector of Inland Revenue, J. B. Powell, who has for years been a neighbor of the deceased. In June of 1890, shortly after the last legislative elections, Mr. Goldie and his friend Mr. Powell were sitting on the beautiful lawn which slopes from the family residence of the deceased down to the river, when suddenly Mr. Goldie said, "Powell, I feel that I am not going to live very long, I don't know why, but I have an idea that I am not long for this world. What a pity to leave such a beautiful place as this! Now, if anything should happen me and I am carried from here to my grave, I want you (and five others whom he named) to carry me to my grave and act as pall-bearers." His wish was obeyed, and these six gentlemen, with two others, carried his body to the grave.

* * * *

George Hill, of Ardoch, North Dakota, who was in the city a fortnight ago, says that last year's grain harvest in Dakota was abundant., but of very little use to the farmer. The drought and famine of the two preceding years had caused the removal of a great many reaping and threshing machines from the State. This year, though the harvest was fair, a large portion of the grain was rotting in the fields, owing to the scarcity of implements for its garnering. The grain that was cut could not all be threshed, owing to the limited supply of threshers, and as a result the poor Dakotan farmer was in almost as bad a plight as he was before. Mr. Hill is not surprised that there should be an exodus of Dakotans to our own North-West Territories.

* * * *

It was Artemus Ward, I think, who once said that he was not much given to "reminiscing." The genial showman, notwithstanding, there is some interest in the occupation of recounting the battles of the past, even though some of them were a long way short of becoming victories. I have a correspondent who has sent me some cogitations along this line that furnish profitable reading. He tells how in the spring of 1859, when all Lyn was putting on her holiday attire, he laid the foundation stone of a flour mill. Everything incidental in the routine of an ordinary mill could be chronicled about it during the twenty-five or thirty years that it ground home or imported grain with Buhr stones. Many a customer has growled at the tollage. Many a woman, up to the elbows in sour dough, has silently uttered maledictions on the miller, and many a prize taken for home-made bread at agricultural shows made from its production has looked upon it as a family friend. It was changed like many others to the roller process, and equipped with the best machinery procurable by its owner, Mr. James Cumming, and since its change it has crept or struggled along like many of its competitors, trying to grind out a fair profit for its possessor. It is not the facts that the mill naturally has a magnificent water power to drive it, two competing railway sidings and the St. Lawrence River to assist it in freightage, nor its size, nor architecturial structure, nor the beautiful natural scenery in its vicinity that we refer to it in these columns. We have a different object. Mr. L. McKinnon, head miller, has sent us a sketch, drawn by himself, of the mill and the buildings in the annex, showing nicely the railway and river accommodation, his employer's residence and other surroundings and written us a long pen sketch, too long for publication, from which we stole our ideas given above, and for which we tender him our hearty thanks. We wish to encourage this correspondence. If Mr. McKinnon can find the time to furnish us with topical descriptions of his mill, and we quote his concluding sentence, surely others can be induced, in the interests of their own daily bread and butter, to throw to one side diffidence, nonchalance and laziness and send us items of their locality for publication, descriptions of their mill, particularly its early history, when perhaps the original proprietor toughed it with pioneer settlers and bartered with the aborigines. There are many mills in Ontario and Quebec whose history ought to be recorded, and there is no more fitting place to contain the record than in the columns of the CANADIAN MILLER. "Difficulties," says our correspondent, "attended the getting up of the above, in that, while pursuing my duties as head miller I did the writing and sketching. Sometimes a line, again a sentence, and so on, was the progress; therefore you will kindly excuse it on the ground of disadvantages."

* * * *

How best to meet the requirements of a rapidly growing business is one of the problems that most men are compelled to face in the early years of their business history. Beginning modestly, and often on limited capital, they find, with push and energy, that trade expands more rapidly than does their ability to meet its calls. Samuel Smiles tells us, in his interesting biography of George Moore, the prince of English lacemen, how sternly this difficulty confronted the young laceman. A Napoleon among travellers, he was able to outsell all competitors, and in a short time built up an enormous business. As might be expected he stirred up the jealousy of rival houses, who, acting on the lines that move the green-eyed monster, left no stone unturned to prejudice his credit, circulating the story, which was in a measure correct, that he was trading beyond his capital. However, Moore was big enough for the place, as he proved throughout his life big enough for any work the people pleased to give him. But everyone is not a George Moore, and with the strongest men the period named is surrounded by untold dangers, and calls for the most judicious management. A short step in a wrong direction may mean unremediable disaster. I have been led into this line of thought through reading the counsel of a writer in a milling journal on the point of over-crowding the mill. This writer says: "Don't overcrowd. By this I mean don't overcrowd either a single machine or your mill as a whole. It is bad enough to overload, or overfeed, or overcrowd a machine, as that means unsatisfactory results, but it is far worse to overcrowd the floors of a mill. A mill that is so 'cluttered up' with extra machines, added as business grows, that the miller can't walk about without hitting or kicking some machine, or a pile of bags, or some other contraptions, is a mill that is sure to be badly managed. The extra machines take up room, exclude light, make passages narrow as well as dark, and render it almost impossible to keep the room clean. Extra dust will be left in the dark and narrow passages. That means bad air and increased dangers of fire. I often find mills overcrowded. In some cases the mill has been built for a certain capacity, for example, 75 barrels a day. The business has grown to a demand for 100 or 125 barrels a day. The owner tries to put in the extra machines without adding to the size of his building. He moves, bunches, huddles, crowds and 'clutters up' his place until he can hardly turn around in it. His formerly light and commodious plant becomes a gloomy one, in which he and his helpers move about like dusty ghosts in a sepulchral light. He has saved the expense of a new building, he thinks. He has really lost all the value of his plant, I think. I believe, in each case where there is the least probability of an increased business, that it is real economy to spend a few more dollars and make the building large enough to permit, without crowding, the addition of new machinery sufficient to cover the probable increase in demand." From the standpoint of the working miller the advice of our friend is sound. The advice of Punch is sound—don't. Don't overcrowd your mill. But don't overcrowd your finances. Better put up with overcrowding somewhere else than at this point.

When the tubes of injectors become scaled, do not undertake to clean them with a file or scraper, as a very small enlargement of the area of the jet will interfere with the working of the instrument, but remove the tubes and place them in a solution of one part of muriatic acid to 10 or 12 parts of water. This will soften the scale, and the tube may then be washed.

Notwithstanding the line on line, article after article, that trade papers have printed on the management of steam boilers, explosions continue to occur with diabolical regularity and with about the usual percentage of fatalities. Is it possible that owners and operators of steam boilers do not read, or, reading, do not understand, or, understanding, do not heed? If they would read, understand and heed, it is certain that boiler explosions would be far less frequent.

The fact that steam piping methods have not kept pace with the demands of higher pressures and modern practice is evidenced by the increasing number of accidents from the failure of pipes and fittings. There has not been for the rapid increase of pressure used a proportionate increase in strength of flanges, number and size of bolts used, and more generous provision for expansion and contraction. When small bolts are used in flanges they are often put under an almost destructive initial tension by "the man with the monkey-wrench," and are in no condition to withstand the excessively high pressures to which piping is now subjected. Valves and fittings also require greater attention in their design, construction and manipulation.

The ability of a lubricator to feed heavy oil depends on the difference between the height of the water column and the connection from the lubricator into the steam pipe. A friend has one in which the water column extends for more than two feet above the body of the cup, but as the delivery is connected into the steam pipe nearly as high up as the top of the water column, the cup does not work in a satisfactory manner. The delivery connection should be lowered, and it is well to remember that if the pipe which is intended to supply the column with water is carried in a horizontal direction, while it may add to the capacity of the cup, or in other words enable it to feed out more oil in an hour, still it does not help it about feeding heavy oil, as the vertical height alone can do this.

To lag pulleys with paper a workman writes:—Scratch the face of the pulley with a rough file thoroughly, so that there are no bright or smooth places. Then swab the surface with a solution of nitric acid one part, water four parts, for fifteen minutes; then wash with boiling hot water. Having prepared a pot of the best tough glue that you can get, stir into the glue a half ounce of a strong solution of tannic acid, oak bark, or gall nuts, as convenient to obtain, to a quart of thick glue; stir quickly while hot and apply to the paper or pulley as convenient, and draw the paper as tightly as possible to the pulley, overlapping as many folds as may be required. By a little management and moistening of the paper it will bind very hard on the pulley when dry, and will not come off or get loose until it is worn out. Use strong hardware wrapping paper.

"What do you do with all the files?" This is the question which the "old man" usually asks when he receives an invitation to hand out a new file. More files are spoilt by laying them down where last used than by any other method. A new file is used once and then perhaps thrown down in the dirt, grease or water, and the dirt, dust and grease thus gathered convert a new file into an old one upon the spot. Keep a file clean at all times and begin when it is new. Before using a new file rub chalk into the teeth, then clean with a brush or wire card; rub in another dose of chalk and the tool is ready for use. The chalk slightly fills the cavities between the teeth and prevents metal filings and dust from collecting therein. Such filling renders the file more easily cleaned and to a certain extent neutralizes any acid that may find its way on to the file.

A mechanic recently learned a lesson about emery wheels by nearly getting killed by the bursting of one of them. The wheel was left running while he went out of the room on an errand. As he came back a piece of the wheel came to meet him, passing within a foot of his head. Luckily no damage was done except to a window, the sash and glass of which went out of doors in company with the broken wheel. There is no need of having such a thing happen. Let a man take an emery wheel in his hand, place the fore finger of his left hand in the mandrel hole of the wheel, with a small wooden mallet (never use a hammer) tap the wheel lightly and note the sound given forth by the blows. A crack can be quickly detected in this way, and if every wheel was thus tested when it came into the shop, and if the practice were followed up every time a wheel is placed upon the mandrel, there would be no accidents from broken emery wheels.

How it Tickles

THAT

LITTLE WONDER REEL

Jas. Goldie, Guelph, orders two

Rathbun Co., Deseronto, order one

McDonald & Thomson, Woodstock, order one

M. N. Stephens, Glencairn, orders two

And still they go . . .

LUTON, Ont., Jan. 18, 1892.

WM. & J. G. GREEY, Toronto, Ont.

DEAR SIRS,—I send $——— to pay for "Little Wonder," according to agreement with you. The Little Wonder is working fine. It has improved my mill wonderfully.

Yours truly,

E. B. HILL.

The Little Wonder
Is a Money-Earner from the Start

Is Unequalled for Making Perfect Separations

NOTHING CAN TOUCH IT FOR

BOLTING OR RE-BOLTING ANY STOCK IN THE MILL

IMMENSE CAPACITY

So small it goes anywhere . . Runs so easy, no trouble to drive

SOLE MANUFACTURERS:

WM. & J. G. GREEY 2 CHURCH ST.

TORONTO, ONT.

We Challenge the World TO EQUAL

The Greey System and The Greey Machinery

They Can't be Beat

They are Reliable

Prices Reasonable

And give Satisfaction

Utopia Roller Mills, J. R. Bell and Bro., Proprietors

UTOPIA, Ont., February 15th, 1892.

WM. AND J. G. GREEY, Toronto, Ont.

Gentlemen,—We have got our mill started again, and consider we now have the best short system mill in this country. The new set of rolls and Little Wonders materially increase our capacity and make a good finish. Will you please send us statement in full of our account and we will remit.

Yours truly, J. R. BELL AND BRO.

We Lead the Times in Roller Machinery

Are Keen for Genuine Improvements

WM. & J. G. GREEY 2 CHURCH STREET

Toronto, Ontario

ORDERS, CORRESPONDENCE AND ENQUIRIES INVITED AND ATTENDED TO PROMPTLY

JNO. TODD, flour dealer, Toronto, has assigned.

T. M. & E. S. EDMONDSON, millers, Oshawa, are succeeded by E. S. Edmondson.

THE larger part of grain in the Northwest still unthreshed will be kept in the stacks until warmer weather comes.

BREAD is down in Toronto. The poor man's loaf can be had in some cases for nine cents; ten cents is the general price.

EDIT & WALPER run a successful 75 barrel mill at Dashwood, Ont., a point pleasantly located five miles from Lake Huron.

LARGE quantities of grain in the vicinity of Killarney, Man., are still unthreshed. A grist mill will likely be erected at an early day.

MCLEAN & KEESE, owner of a ten-horse power thresher, continued threshing at Killarney, Man., when the thermometer was 4° below zero.

THE grain exchange, of Winnipeg, Man., is discussing the matter of getting railway companies to carry seed grain between points in the province.

THE new town of Oxbon, on the C.P.R. Souris branch, Man., boasts of four grain buyers on the market shipping from ten to twelve cars of wheat per week.

CARNUFF, N.W.T., is agitating for the erection of a flour mill. A bonus of $4,000 will be given to a good practical man who will undertake to erect a 100 barrel mill before the coming fall.

THE flour mill at Carberry, Man., has closed down. Rogers & Blacadder, owners, say that owing to the poor machinery with which the mill is equipped, they could not compete with other points.

THE Glenwood roller mill at Souris, Man., is 32x48 feet and four storeys high, with an engine room 28x32, and two storeys high. Attached to the mill is an elevator with a capacity of 20,000 bushels.

THE Lake of the Woods Milling Company have moved their Winnipeg offices to new premises on the corner of Main and James Streets, which have been fitted up in very comfortable and attractive style.

THE mill of J. B. Petheran, Duncrief, Ont., known as Charlton Mills, is running full time on custom work. Mr. Petheran has added a Leonard Ball Automatic Engine to supplant the water power.

S. NAIRN, of the Winnipeg, Man., oatmeal mill, has completed some additions and improvements to his oatmeal mill. Amongst other things he has adopted machinery for making rolled oats by a new process.

THE new farmer's elevator at Regina, Assa., is securing a good share of business. Three eastern buyers have come in to compete with the local men, namely McMillan & Co., Lake of Woods Co., and S. P. Clark & Co.

HUGH MCKAY, of Edmonton, Man., received a letter recently from Wm. Brown, of Lockerby Mills, Paisley, Ont., asking if there was an opening for an eighty barrel roller mill, as he is dissatisfied with his present location.

E. Sexsmith, of Bridgewater, Ont., has purchased the flour and grist mills at Downey's Rapids, or, as latterly called, Glen Lewis, from a loan company at a very low figure, and will commence operations there at once. The price is understood to be $2,000, which is only about one-quarter amount of mortgage.

THE town council, of Calgary, Man., in view of the increased acreage of wheat to be sown this year in the district, and along the line of the Calgary and Edmonton Railway, north and south, have decided that unless private parties accept the bonus offered for building the mill by the first of March, the corporation will proceed with the construction of a 150 barrel mill as a town investment. The offer is of $3,000 bonus and exemption for ten years.

THE Committees of the Board of Trade, of Toronto, will be as follows for 1892: Call Board—Messrs. M. McLaughlin, J. L. Spink and John Carrick; J. L. Spink, chairman. House Committee—H. N. Baird, W. D. Matthews and D. R. Wilkie; H. N. Baird, chairman. Railway and Transportation—R. W. Elliott, W. Christie, Warring Kennedy, J. Donogh and A. A. Allan; J. Donogh, chairman. Legislation—Hugh Blain, S. F. McKinnon, W. R. Brock, George H. Bertram and A. B. Lee; Hugh Blain, chairman.

A FIRE took place at Tweed, Ont., the early part of the month, completely destroying the mill and elevator of George Easterbrook. The mill was one of the finest in that section of the country, being fitted up some three years ago with a full roller process, new engine, etc. The elevator contained 25,000 bushels of wheat, most of which was owned by Richardson & Son, of Kingston. The loss will be about $46,000; insurance only $16,000. The property was jointly owned by George Easterbrook, his son John, and his brother William Easterbrook. The loss is a heavy one for Tweed.

TRACEY D. HULL, a Chicago man, is reported to have sued W. W. Ogilvie, the Canadian flour mill owner, for $200,000. This sum covers $132,000 commissions alleged to be due for work in arranging a sale of the defendant's plant and for damages for breach of the contract. Last year Mr. Ogilvie is said to have wished to sell the business, and commissioned Hull to arrange a deal with an English syndicate. Mr. Hull says he secured an option on the mills and responsible English capitalists who were willing to pay $1,750,000 for the business. But he claims defendant refused to sell after the deal was planned. "He gave no good reason for his action," said Attorney David Campbell, representing plaintiff. "He simply refused to sell, and this suit is for commissions secured by Mr. Hull by his contract." Mr. Ogilvie was in Chicago recently, and the opportunity was taken for suing him there.

THE Grand Trunk, through their general freight agent at Toronto (Mr. John Earls), has notified the city grain men to the following effect: Some difficulty occasionally arises in consequence of alleged overcharges on Manitoba grain for milling in transit, and on enquiry find this is largely owing to the regulations being made by this company with the secretary of the Millers' Association are not being observed. The principal regulation is that Manitoba wheat via Chicago and G.T.R. for milling in transit, should all be consigned and filed "To Montreal for export—to be held at Point Edward for orders." Consignments should now read "To Montreal for export—to be held at Point Edward or Sarnia tunnel for orders." If this is not done and the grain is consigned to Point Edward or Sarnia only, other, or local, charges may arise beyond the terminus of the G.T.R., and for which the company cannot be responsible.

A BOARD of Trade arbitration in the case of Alexander Brown & Co., of the Citizens' Milling Company vs. A. Cavanaugh and J. L. Spink, all of Toronto, has resulted as follows: The dispute occurred over the purchase of a car of No. 1 hard wheat sold on the open call board at Toronto as No. 1 hard, Winnipeg inspection on track here, and the point at issue was whether a bill of lading with inspection certificate stamped upon its face as follows: "According to inspector's certificate, which I hold, the wheat in this car is No. 1 hard, Winnipeg inspection," (signed by the agent of the G.T.R.) was a good delivery on the sale of a car of No. 1 hard wheat, Winnipeg inspection. The arbitrators awarded that Cavanaugh and Spink's delivery was a good one, they having presented the bill of lading stamped on as above. Alexander Brown & Co., must therefore pay for the wheat. James Stark and Charles B. Watts (central wheat buyer), were the arbitrators, with J. H. G. Haggarty as referee.

THE mystery surrounding the disappearance of John Payne, of Stratford, Ont., early in January, and his whereabouts since then was partially cleared up by the receipt of a telegram from the medical health officer of Houston, Tex., announcing his death at that city. Mr. Payne was a prominent grain buyer, and had been engaged in business there for some years. He had been fairly successful and was looked upon as a thoroughly upright and honest citizen. He left Stratford for Buffalo, January 11th, and there for some time all trace of him was lost. It was feared that he had met with foul play, but through the efforts of Hon. Thomas Ballantyne, M.P.P., and Mr. J. F. Palmer, who went to Buffalo to prosecute the search for him, assisted by the police, it was finally learned that he had gone to New York and there taken a steamer for Galveston, Texas. From letters received by his family, the contents of which have just been made public, it appears that Mr. Payne had lost rather heavily in wheat speculations, and that when he left it was with the hope that he would be able to tide over his financial difficulties, but as the market continued to decline he seems to have lost all hope, and, according to his own statement, boarded a steamer in New York without knowing where it was going. He finally found himself in Galveston, Texas, from which place he wrote that he was ill and had suffered intensely from mental worry. He said that he expected to leave Galveston and would send his address later on. He was next heard from at Houston, Texas, but he again intimated that they should not write to him there, as he would soon leave. Nothing further was heard from him until the telegram announcing his death, was received. His flight to Texas and death there are generally looked upon as the outcome of his sensitive nature, and from the despondent though affectionate letters which he wrote to his family it would seem as though he virtually died of a broken heart. The remains were embalmed and sent home for interment.

A SHIPMENT of 70,000 sacks of flour has just been made from St. Louis, Mo., to Great Britain.

THE wheat receipts at Chicago during 1891 were 43,000,000 bushels, against 13,367,000 bushels for 1890.

THE flour production in Milwaukee for January, 1892, was 210,900 bbls., against 155,700 in January, 1891.

E. GODDARD & SONS, flour milling men, of St. Louis, Mo,, have assigned. Liabilities $130,000, assets $97,000.

IT is said that British millers find spices mixed with Indian wheat, and extreme difficulty is met with in separating the grain from the spice.

THE Detroit Chamber of Commerce proposes to erect a building suitable for its purposes at a cost of $100,000, a small sum for so wealthy a city.

IN 1891 Chicago's flour receipts amounted to 4,602,000 barrels, against 4,358,000 barrels for the year 1890. The shipments were 4,100,000 barrels, against 4,134,000 barrels in 1890. The exports of medium and low-grade flour were liberal, while most of the patents were sent direct from the mills.

A BERLIN dispatch says: Corn bread is being extensively experimented with, not only in the army, but among the people. In some mining districts in upper Silesia, two parts of corn flour were mixed with three parts of rye flour, and baked as bread. Five pounds of this bread are selling for 17c. or 3½c. a pound, which is ½c. less than clear rye bread.

AN exchange calls attention to the fact that the freight annually carried through the Detroit River has for some time past exceeded the total exports and imports of the whole country. The growing popularity of this water route is sufficiently shown in the fact that the net capacity of all the vessels employed on the great lakes increased from 634,652 tons in 1886 to 826,360 tons in 1890, or a trifle over 30 per cent. The value of the freight carriers increased even more than that—from $30,597,450 to $58,128,500, or about 90 per cent.

BUDAPEST milling companies had a good year in 1891, judging from the market price of their shares, which show a decided improvement all around, as the following quotations of shares at the end of the past two years show:—

	1890	1891
Concordia	497fl	584fl
Elizabeth	370	463
Louise	270	315
Miller and Bakers'	450	470
Roller Miller	530	555
Victoria	248	255
Ofen Pester	1,065	1,240
Pannonia	865	990

MR. CHARLES MURPHY, who is commissioned by the United States Minister of Agriculture to introduce maize into Europe as the basis of breadstuffs, arrived in Berlin and was received by the Minister of Agriculture, to whom he submitted samples of bread. It is reported Mr. Murphy had loaves baked out of one pound of maize flour and one pound of rye meal which weighed four pounds. This is something like a water absorbing flour. If we had it in this country there would be no short weight bread; but what a disaster to the policeman who seeks promotion by prosecuting bakers. The expense of these loaves, including import duty on the corn, will not be more than two-pence, while rye bread of the same weight now costs seven-pence. It is asserted that the maize flour cannot be tasted in this new bread.

ITALY groans under the burden of taxation imposed by her rulers. The most onerous of all the taxes are the octroi duties on food, a tax collected at the gates of towns and cities. Beef pays two cents a pound, and the retail price is from eighteen to twenty cents. Salted meats sell at from fifteen to twenty cents a pound, and the octroi tax is three cents. Wheat flour sells at six to nine cents a pound, and the tax is one-half cent; macaroni seven cents, and the tax is three-quarters of a cent; eggs eighteen to forty cents a dozen, and the tax is ten cents. This will give some idea of the octroi tax and cost of living. Meat is almost unknown among the laboring classes, and, although Italy is the land of macaroni, it is seldom used by the working classes, owing to its high price. They generally use an article called paste, composed of inferior wheat flour mixed with flour of chestnuts. Beans are also one of the staple articles of food. Two meals a day are the rule among the working people. Soup is the chief dish at the evening meal. Tea and coffee are unknown to them, but cheap wine is common.

Office of the CANADIAN MILLER,
February 15, 1891.

THE GENERAL SURVEY.

UNSETTLEDNESS and uncertainty have been features of the market for the month. Prices have not ruled high, nor has the volume of trade been large. The past few days have seen a slight advance in wheat, but it has not imparted any lasting strength to the market.

The situation in Chicago has been rendered further uncertain by a report started moving by the Tribune of that city, which states that the wheat market is being manipulated by a syndicate at the back of which are J. D. Rockfeller, of the Standard Oil Company; James T. North, "the Nitrate King;" and John W. Mackay, the bonanza millionaire. The paper claims that sales of wheat on the Chicago Board of Trade alone aggregate 70,000,000 to 80,000,000 bushels, whereas there are less than 40,000,000 bushels of actual wheat in the West, leaving about 40,000,000 bushels which are really "wind" sales, and must be covered at whatever price the market touches. But this is not all. Similar short sales have been made in all of the principal markets in this country and Liverpool. It is asserted that the alleged combination of millionaires sent agents abroad and secured accurate information as to the real shortage of the crop, and as early as the middle of December began to quietly pick up all the wheat offered, working through comparatively unknown brokers, traders who were accustomed to deal in small lots, and that they thus, without attracting attention, secured absolute control of the market. Whether or not the price will be put to a higher figure is known only to the clique.

Total receipts at the four principal United States spring wheat points, since August 1, the beginning of the crop year foot up: Minneapolis, 41,510,852 bushels; Duluth, 34,652,547 bushels; Chicago, 34,267,212 bushels; Milwaukee, 7,989,814 bushels, making a total of 118,420,425 bushels, against 60,357,649 bushels during the same time last year and 67,268,034 bushels in 1890. The total receipts of wheat at the four principal winter wheat points, Toledo, St. Louis, Detroit and Kansas City from July 1 to date are 55,166,870 bushels, against 21,068,654 bushels in 1891, and 25,518,050 bushels in 1890.

Of the British grain trade the Mark Lane Express in its review for the current week says: The prices of English wheats have recovered 6d. Trade at the rise is slow. Foreign wheats are less depressed. The Continent is buying freely of Californian, Argentine and Indian at 6d. advance. Californian sold at 39s. 6d., and American red winter at 37s. 9d. Flour is quiet. The supplies are abundant. American is in fair demand, and prices are 6d. per sack better. Corn is weak. New American sold at 20s. 9d. Barley and oats are firm.

The Liverpool Corn Trade News figures the outlook as follows: Requirements of wheat importing countries for the crop year, 52,300,000 quarters. Foreign wheat now in stock or afloat for Europe, 11,000,000 quarters, including flour. Portion of requirements for the crop year already supplied, 24,000,000 quarters. Requirements yet to be filled during the seven months to the first of August—the end of the crop year—25,600,000 quarters, or about 850,000 quarters per week. The Corn Trade News thinks, however, that with present large reserve stocks, Europe can get along to the end of the crop year with an additional of 20,000,000 quarters. About 7,000,000 quarters of this may be obtainable from India, Australasia, South America, Eastern Europe, etc., and the balance of 13,000,000 quarters, equal to 104,000,000 bushels, must come from America. The Liverpool journal seems to doubt the ability of America to supply this amount, but we believe the United States and Canada can easily make up the quantity, and more, too, if wanted. The Cincinnati Price Current estimates that the United States alone had a surplus of 125,000,000 bushels of wheat on January 1st.

In our own country deliveries are light and prices are not tempting the farmer. Manitoba deliveries are being interfered with by the continued cold and stormy weather. The Winnipeg Commercial says: "Deliveries have certainly fallen very flat ever since the first of the year, and the quantity of grain coming in has been greatly under expectations. This is due to three causes, namely: considerable rough weather, lower prices than farmers care to sell for, and the large quantity of wheat still unthreshed. There is no doubt but that a good deal of wheat is held by farmers, on account of prices being below their expectations. In some sections of the country, particularly southwest and west, a very large portion of the crop is in stack. Travellers who have been through these districts recently, say that the stacks appear to be as thick about the country as they were last fall." The Commercial strongly advises holding the unthreshed grain in stack until summer, rather than run the risk of threshing even when an occasional mild day shows itself.

Put in the fewest possible words there is nothing to indicate a remarkable scarcity of wheat anywhere. Even in Russia the distress there is due largely to the difficulties of transportation. The stocks on hand, apparently, in both continents are large. Something may develop to change these conditions, but this something is not visible now. The outlook for the growing grain in European countries, as well as in America, is at this period hopeful of a good crop for another year.

WHEAT.

The market has partaken largely of quietude for a month back. It has had its fluctuations and changes, sometimes the bull element being on top and again the bears having their turn. News from Chicago tells of conditions being slightly disturbed because of the anti-option bill now before Congress. So long as this measure is in the way it is likely to prove a menace to higher values.

The English market is a little sluggish, the stocks being equal, if, indeed, not ahead of demands. The London (Eng.) Miller expresses the opinion that within the month "wheat will probably recover firmness, though we fear that in any case buoyancy is hardly to be looked for. The markets may be inspirited by firmer holding in America, but the days of the 'corners' appear to be past; at all events a yield which exceeds 70,000,000 quarters is too big to be manipulated."

Markets at date are as follows: Liverpool: Spring, 7s. 10½d.; Red Winter, 7s. 8½d. to 7s. 9d.; No. 1 California, 7s. 11d. to 8s. Futures: No. 1 California, 7s. 10¾d. February and March; 7s. 11d. April; 7s. 11½d. May; 7s. 11¼d. June. American: Chicago: February, 87½c.; May, 91c. Oswego: white state, $1.01; red, $1.02. St. Louis, 92¾c. for May. Duluth: No. 1 hard 86½c. for cash; No. 1 Northern, 85c. for cash; No. 1 Northern, on track, 86½c. for cash; No. 1 hard, 86¾c, for February; No. 1. Northern, 85¼c. for February; No. 1 hard, 92c. bid for May; No. 1 Northern, 90½c. bid for May. Canada: Ontario, standard, fall, 86c. Manitoba: No. 1 hard, $1.02; No. 2 hard, 99c.; No. 3 hard, 91c.; No. 1 regular, 80c.; No. 2 regular, 70c. delivered from North Bay.

BARLEY.

The assault of Representative Fitch, of New York City, on the McKinley Bill, is giving increased interest to the subject of barley. In this he is backed up by the Buffalo and Oswego maltsters and grain men. This measure failed just where it was supposed it would be strongest. The farmers of New York state helped by their influence to carry the bill, expecting that when Canadian barley was ousted from the field that prices for the home grown grain would at once increase in price. But the experience of a twelvemonth has shown how badly out they were in their calculations. American barley did not advance in price. The increased tariff has precluded the purchase of Canadian barley; with their own product they cannot secure the satisfaction for malting purposes that is an absolute essential to success in their business. In a word, the American maltster says he must have our barley; and the exclusion during the past season of 12.000,000 bushels has paralyzed trade in Buffalo and Oswego in so large a degree that their elevators are doing nothing, and business generally in these lines is at a standstill. The proposition of Mr. Fitch is to reduce the duty to ten cents, as before, and the indications are that the measure will become law. The effect of the McKinley Bill on the Ontario farmer is shown in the decrease in the growth of barley. The average barley acreage for the years 1882 to 1890 was 764.365. In 1891 this had decreased to 553,166 acres, and it is likely that for 1892 there will be a further decline. It simply will not pay our farmers to grow barley at the prices that have prevailed lately. A reversion to the old order would give a boom again to the cultivation of this cereal.

Prices have not changed materially during the month, and the market has been quiet. Toronto: No. 3, 41c.; Manitoba, 43c. at North Bay. Buffalo: Fancy Western, 70 to 71c.; choice, 68c.: No. 2 Western, 65 to 65½c.; poor Western, 50 to 55c.; State, 65 to 70c.; Michigan, fair to choice, 58 to 64c.; No. 2 Canada, dull, 84½ to 85c. At Oswego and Albany the markets are nominally unchanged. Milwaukee reports a very quiet market, with No. 2 quoted at 54c.; sample, 41 to 60c. Chicago—Dull: No. 2, 56 to 58c.; No. 3, f.o.b., 38 to 55c.; No. 4, do, 34 to 46c.

OATS.

An indication of greater firmness has been noticeable during the month, though prices have not varied to any material extent. Sales were made on the track at 32c., and outside sales were closed at 28c.

PEAS.

Prices are perhaps a cent or two lower than they were a month ago with a fair market. Sellers are asking 57c. with buyers at 56c.

RYE.

Nothing much doing in the rye market. No. 2 has sold in Buffalo at 92c. on track. There has been a somewhat firm demand in local markets at 80c., f.o.b., at points of shipment.

FLOUR.

An article has appeared in the Montreal Trade Bulletin recently that in its way is quite suggestive. Flour trade in Montreal has decreased and dwindled away to such proportions that at the present time the fees derivable from inspection of flour are not even enough to pay a deputy. These conditions are contrasted with the time when the position of flour inspector was sought after by such men as the Hon. John Young. In those days the flour trade of the city extended into the millions in value annually. There are many causes to account for this decadence, but the principle of these is believed to be the high standard of inspection, which it seemed to be a tradition among successive Montreal inspectors to maintain. The inspection in Toronto, it is alleged, was just as "easy" as the one in Montreal was "hard"; "and though buyers knew they could implicitly depend on the Montreal inspection, that the quality, soundness and weight, was absolutely correct, they also found that all their guarantees made the cost of the flour a little higher than other places where they were not so particular; so trade gradually went to the cheapest market. In corroboration of these remarks, flour bought in Toronto, having been inspected there, has time and again been brought down to Montreal and cut down a grade by our inspector here. All these are changed now, and millers find it more to their advantage to ship their flour untrammeled by any inspection whatever." The situation is serious enough to render it extremely possible, the Bulletin thinks, of Montreal being in the immediate future without a flour inspector. What is the remedy? Attention is drawn to the fact that cases have come before the Dominion Millers' Association, showing that flour has been shipped from Ontario short weight. This evil is attributed to what is charged as the faulty system, or want of any system, of inspection in this province. But the vigorous manner in which the D.M.A. grappled with this matter, when it was brought to their notice, may be taken as an assurance that this particular evil will be speedily stamped out. We give, however, the proposition of our contemporary: "Our friends in Ontario want to know how to stop this short weight business. It can only be done in one way, and that is by making inspection compulsory. This is quite feasible; inspection is compulsory on other articles of commerce

now; it would protect the public who are being cheated, and would put traders on a footing of equality. The charge need not be more than one-half cent per barrel which would pinch nobody. This is the proper solution of all these difficulties and the sooner it is put into practice the better."

The business in flour throughout the month has been quiet. Local trade has about held its own; any movement outside of this has been slow. Some satisfactory orders, however, have been reported from the Lower Provinces. The secretary of the Dominion Millers' Association reports for export, "Some sales of straight grade at $1.84 per hundred pounds."

The Minneapolis market has shown increased strength within the past week. Freer buying was observable from foreign markets. The direct exports of flour from this point were 62,520 barrels, against 53,000 barrels the week previous.

Quotations at date are as follows. Toronto: Ontario patents $4.50 to $4.90; straight roller $3.95 to $4.00; extra $3.80 to $3.85; low grades, per bag, $1.25 to $1.75. Quebec: Flour is dull and depressed, with very little demand. During the past week a few cars of straight roller in bags were sold at $2.05 to $2.07½, and some low grades by sample at low figures. Quotations are as follows: Strong bakers' $4.80 to $4.90; patents $4.70 to $4.90; straight rollers, $4.40 to $4.50; extras, $4.10 to $4.20; superfines, $3.50 to $3.90. Montreal: There is a fair enquiry for flour for local consumption, but the volume of business continues very small at unchanged prices. Patent spring, $5 to $5.25; patent winter, $5 to $5.25; straight roller, $4.65 to $4.70; extra, $4.20 to $4.30; superfine, $4 to $4.10; city strong bakers', $5; strong bakers', $4.75 to $4.90. Winnipeg: Wholesale quotations to the local trade in broken lots are as follows, per hundred pounds: Patents, $2.35; strong bakers', $2.15; second, do $1.70 to $2.00; XXXX, $1.20 to $1.30; superfine, $1.10 to $1.15. The prices are for well-known brands. Some brands selling under quotations.

PERSONAL.

A. M. Robertson, vessel owner, Hamilton, Ont., is dead.

Mr. W. W. Ogilvie, of Montreal, Que., has donated $1,000 to the proposed Y.M.C.A. building at Winnipeg.

J. E. Stein, editor of the Commercial, of Winnipeg, Man., has been elected president of the Winnipeg Board of Trade.

F. W. Thompson, manager at Winnipeg, Man., for the Ogilvie Milling Co., is in Florida, where he will remain for two or three months.

The Toronto Board of Trade will be represented at the Imperial Conference of British boards of trade and chambers of commerce, which is to be convened in London in June, by W. D. Matthews, the large grain merchant, and Phineas Burton, wholesale dry goods.

Simeon Howes, of Silver Creek, N.Y., died on the 28th ult., aged 76 years. He was one of the best-known manufacturers of milling machinery in the United States. Personally he took rank as a man of untiring industry and was the soul of honor in all his business transactions.

J. W. Sandison, who is known in Manitoba as the wheat king of the Brandon district, has sailed for Glasgow, Scotland, accompanied by his wife. Before departing Mr. Sandison ordered thirteen new Massey-Harris binders, and paid the land commissioner of the Canadian Pacific $22,000 for land which he proposes to add to his extensive farm. Eight years ago Mr. Sandison came to Manitoba as a farm laborer.

Mr. Charles H. Waterous, senior partner of the Waterous Engine Works Co., died at his home in Brantford, Ont., on the 10th inst. He was born in Vermont and came to Brantford in 1848. He at first managed the machine shop of Mr. Van Brocklin, but in 1855 bought out his employer, and from that time until 1877 had the concern under his direct supervision. The business assumed large proportions, and in 1877 it was formed into a company, the sons of deceased sharing the control with him. Mr. Waterous was born in 1814, and was therefore 78 years of age at the time of his death. He was married in 1839. Mrs. Waterous and one son pre-deceased him. There are six children now living, J. E. Waterous, Ald. C. H. Waterous, David Waterous, of Brantford; Mrs. Agnew, Montreal, and Fred and Frank, who are connected with the branch works at St. Paul, Minn.

CHAFF FOR THE DUSTIES.

"Where are you going, my pretty flour?"
"I'm going to Liverpool, this very hour."
"When will you get there?" then said he,
"Heaven only knows, sir, don't ask me."

Never kick an electric wire when it is down.

Bread is the staff of life, and pie is the stumbling-block.

Don't pray too long in church on a cold day if your horse is standing outside in the storm without a blanket.

Some real nice business men don't believe in advertising, and some very nice red apples decay from the centre.

TRADE NOTES.

The Northey Manufacturing Company, of this city, whose steam and water power pumps have given them an enviable reputation in all parts of the Dominion have incorporated as a limited liability company with a capital stock of $100,000. Messrs. Pell, Northey, Leys and Lee, of Toronto, are the main promoters of the concern—a strong quartette of shrewd and capable business men.

The Dodge Wood Split Pulley Co., of Toronto, directs the attention of our readers to a letter published by them in their advertisement of this month. The letter being one of praise and hearty endorsation of the Dodge Company's patent system for transmitting power to a distance, the power being in this case carried some 125 feet; and as to the manner in which the work is done, Messrs. McCullock & Herriot's letter speaks for itself.

THE case recently brought against the Province of Quebec Lottery by one Richardson has been dismissed with costs. It is said that certain individuals have made a determined attempt to lay their hands on the funds of this concern, which is legalized by the government of the province of Quebec, in the hope of striking a rich mine, but in this they have evidently been mistaken. This lottery has drawings twice a month, and extensive prizes are awarded. The managemeet announce that all patrons and agents can rest assured that drawings will take place as usual and all prizes will be paid immediately on presentation of the winning tickets.

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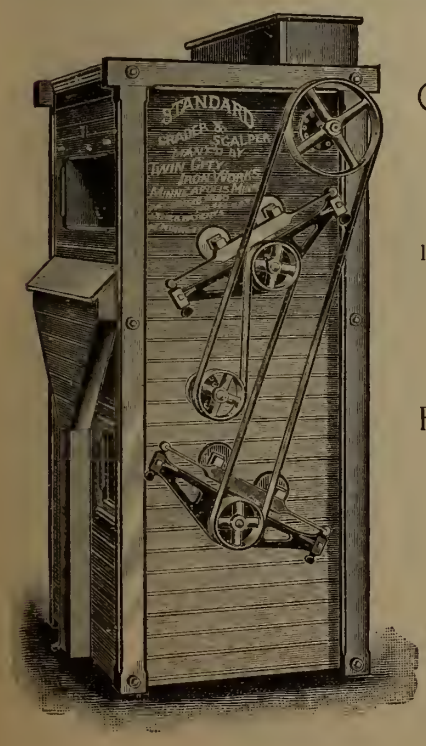

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Frank Noble and Hiram Snyder, the patentees, are now having their machines manufactured for the Canadian trade solely by : : :

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Is at home in any work you can put it to. Away ahead of anything on the continent for
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Pays its cost in a few days. It has
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"There is more money for the Miller in the Cosmopolitan than in the Purifier. We like it well."
HEWSON BROS.
The Roller Mills, Teeswater.
This Bolt embraces scientific principles; runs light; no friction on the cloth; bolts fast; makes highest grade; cleanest finish; minimum low grade. It's a dryer and cooler; flour won't sour.
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or MAGUIRE & DRYDEN, 78 Esplanade W., Toronto

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Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 12th of each month to insure insertion in the following issue.

$15.00 BEST WHEAT STEAMER AND Heater in use. Send for circular.
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Jersey City, N.J.

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A FULL ROLLER FLOUR MILL, WATER power preferred. Address
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BY A STONE MILLER OF THREE YEARS' experience, in a roller mill of from fifty to two hundred barrels, where he could learn the business, with the chance of a steady position if both parties were suited. Best of references given as to ability and habits. Will go one month on trial. Address
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ESTABLISHED 1885

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The system adopted has been to inspect all risks before acceptance, and fix the rate to be exacted equitably in accordance with the hazard assumed.

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The President in moving the adoption of the report, February, 1891, said :—

"I have, however, much pleasure in drawing your attention to the fact that the commission income alone, as you will see by referring to the Revenue Account, **exceeded the total claims for fire losses, a record, I believe, unprecedented in the history of any other fire insurance company either here or in the mother country.**

The assurers with this Company, since it was established in 1885, have already saved on the current exacted rates, upwards of **forty-five thousand dollars.**

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Millers should send in their announcements for the March MILLER not later than the 5th prox.

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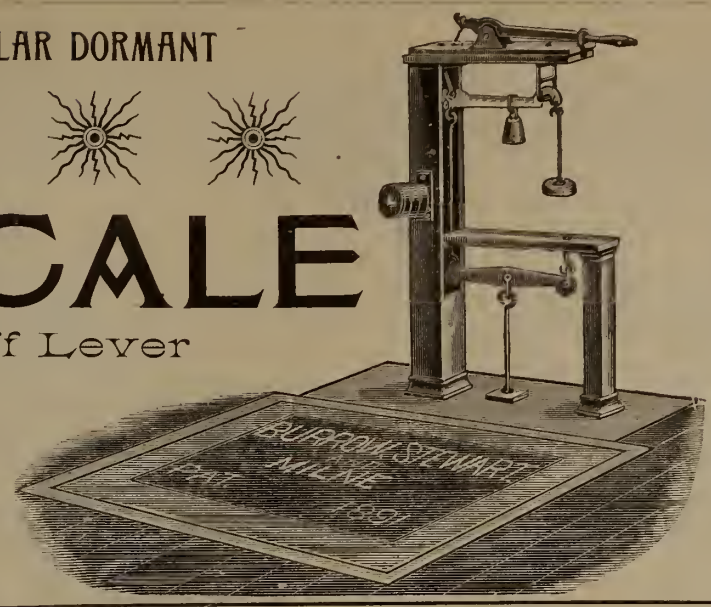

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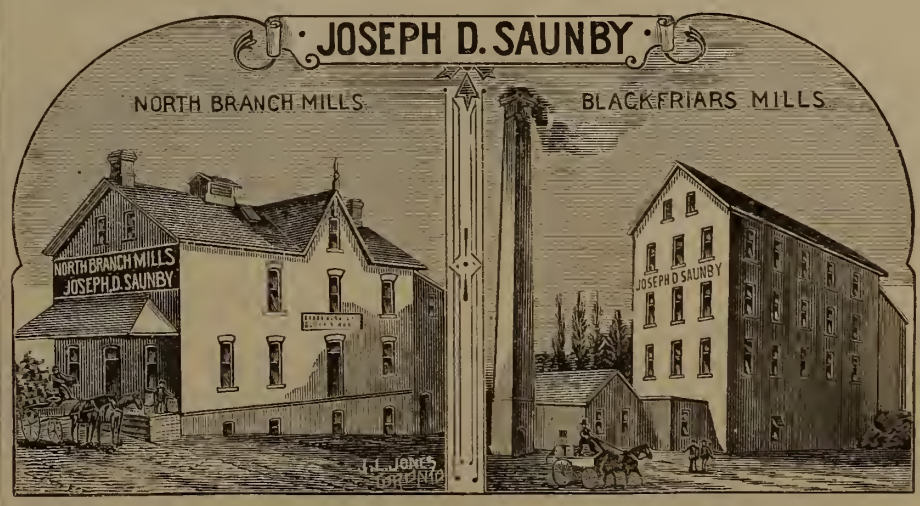

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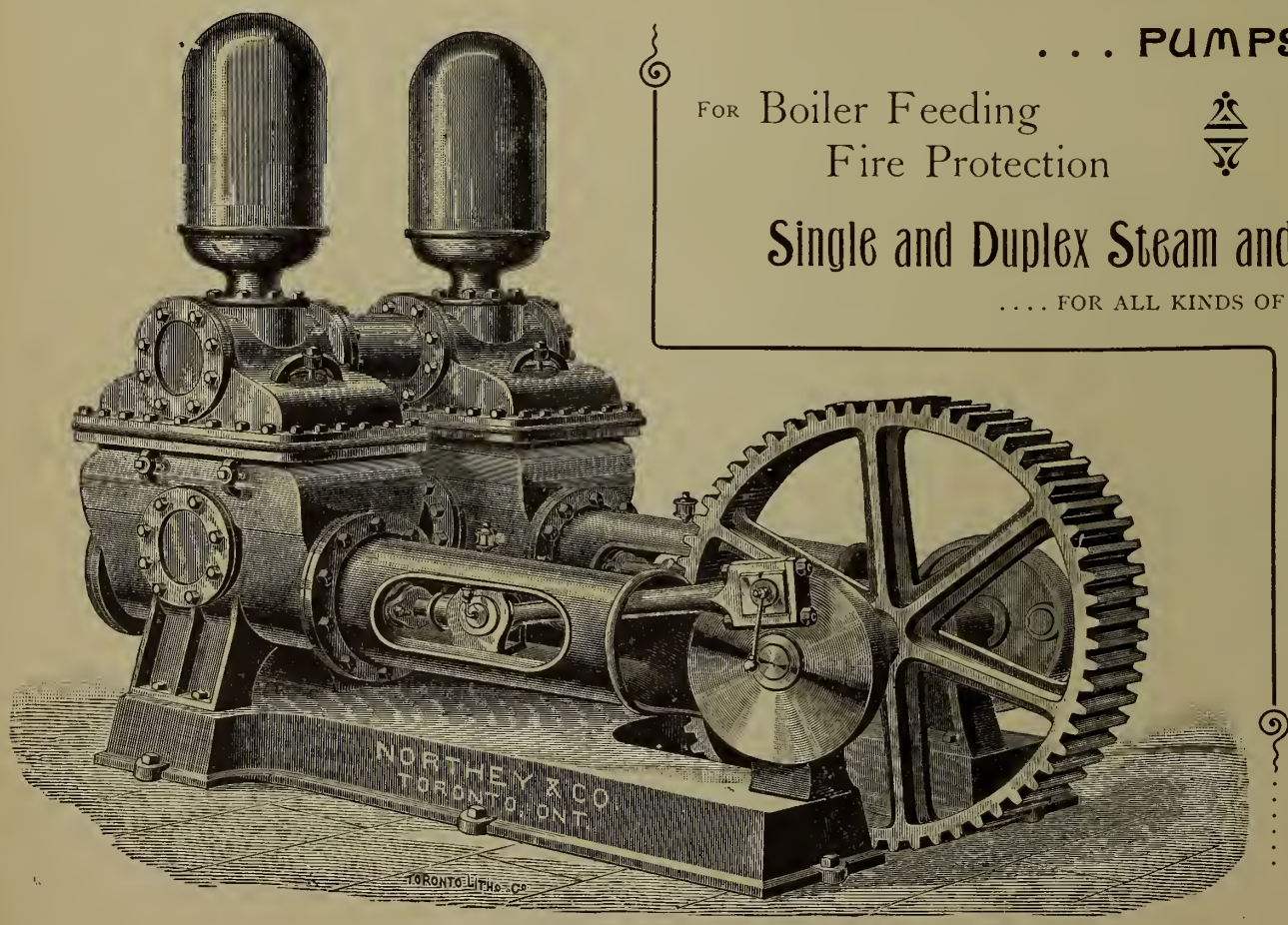

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OLD SERIES, VOL. X. } NUMBER 3.
NEW SERIES, VOL. II. }

TORONTO, ONT., MARCH, 1892

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THE MAGNOLIA ANTI-FRICTION METAL CO., 74 Cortlandt Street, New York, N.Y. NEW YORK, N.Y., March 5, 1891.

GENTLEMEN,—About March 26, 1890, samples of metal marked "Spooner's Finest Copperine Babbitt" were submitted to me for test; its test showed finest results, and on analysis it proved to contain no copper, and approximated the formula of Magnolia Metal.

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Yours truly, H. G. TORREY.

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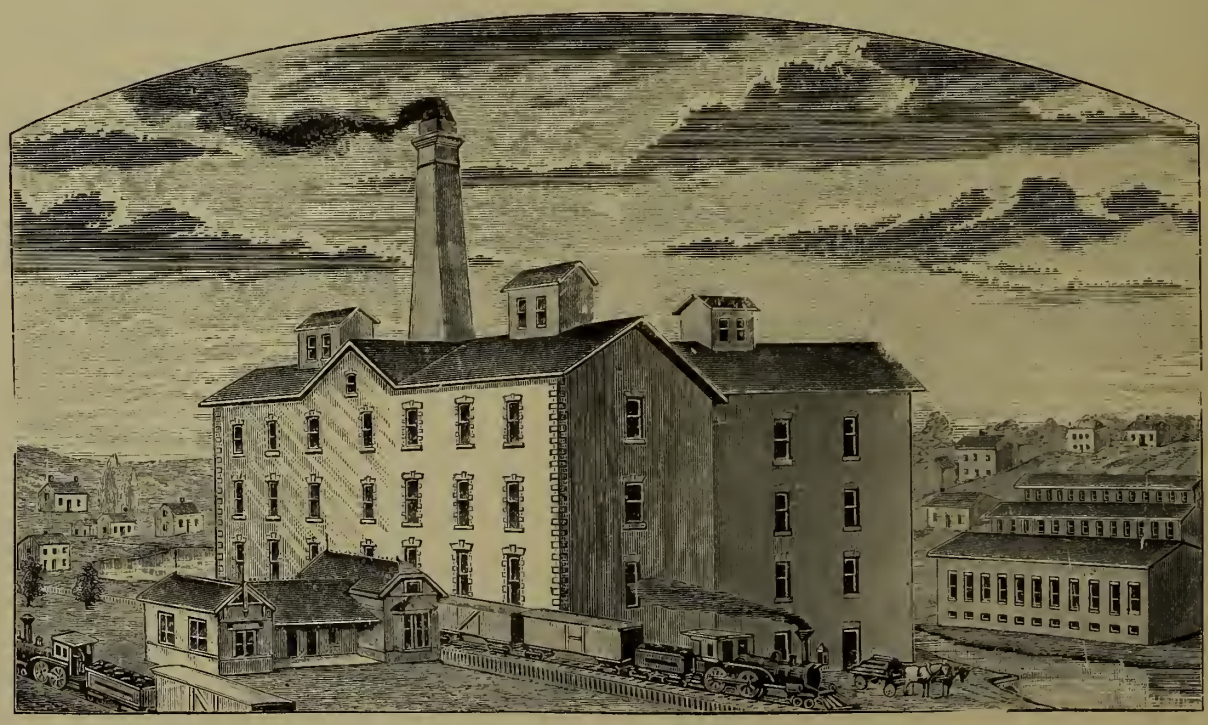

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New Series, Vol. II. }

TORONTO, ONT., MARCH, 1892

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CHARACTER SKETCH.

MR. EDWARD PEPLOW

PRESIDENT DOMINION MILLERS' ASSOCIATION.

"It is perfectly indifferent within what circle an honest man acts provided he do but know how to understand and completely fill out that circle.—Goethe."

IN August, 1891, when the members of the Dominion Millers' Association met in this city in annual session, the name of Mr. Edward Peplow, of Peterboro', was prominently mentioned in connection with the presidency. Mr. Peplow, however, could not see his way clear to accept the position, and refused to allow his name to go to nomination. Without asking "by your leave" his friends insisted that he should be a candidate for vice-president, and to that position he was elected.

In the lamented death of Thomas Goldie, than whom the deceased had no warmer friend and more loyal co-worker, Mr. Peplow, by virtue of his office as Vice-President, becomes the chief executive officer of the Dominion Millers' Association. It is a case of greatness thrust upon the man; at the same time, a greatness which Mr. Peplow, as an old and experienced miller, and one unselfishly devoted to the milling interests of this country, rightly merits.

Mr. Peplow is an Englishman, born in Shropshire, in 1839. He knows little of his native land from actual residence there, having removed, with his parents, while quite young, to Canada, and located in the vicinity of Peterboro'. When twenty-one years of age, in the year 1860, he took up his abode in Port Hope. Milling was his business, and in this town he engaged in milling on his own account, and by the force of his own merit has steadily made his way ever since.

In 1870 Mr. Peplow withdrew from milling and entered into the commission business, handling largely grain and flour. From 1880 to 1885 he had the management of the two large elevators of the Midland railway, since merged into the Grand Trunk system.

His native modesty which, without any simulation, it can be said, is a marked element in the character of Mr. Peplow, has never made him anxious for public office, but frequently this is a class of men on whom it is most desirable to place public responsibilities. Mr. Peplow's fellow-citizens in Port Hope took this view. For ten years he served on the Board of Harbor Commissioners of Port Hope, giving to the office that conscientious work that Mr. Peplow puts on any undertaking which secures his co-operation. In 1887 he became an alderman, and in 1889 was elected mayor of the town. It is simply a matter of historical record that during his occupancy of the chief magistrate's chair, he filled the office in a manner as creditable to his own talents and devotion as it was beneficial to the town of Port Hope.

Mr. Peplow is prominent in Masonic circles, having attained to the position of D.D.G.M. In religion he is a Methodist, and one who by deed and work has given the Church many years of faithful service on its official Board, and in other offices.

In 1889 Mr. Peplow returned to what might be fairly termed his native home, Peterboro', entering into co-partnership with Mr. Hilliard, under the firm name of Hilliard & Peplow, millers. Their mill is one of the best-known in the province, for the best thoughts of both partners are given to its management and development. What this means is shown in the large trade done by the firm in mill products both at home and abroad.

The respect which Mr. Peplow won during his twenty years residence in Port Hope goes with him in all his affairs as a citizen of Peterboro'. M'Combie in his writings has said: "Right action is the result of right faith; but a true and right faith cannot be sustained, deepened or extended save in the course of right action." To make a single application that will be appreciated by every miller, how exactly has this line of thought been acted out by Mr. Peplow, as a member of the Dominion Millers' Association. He has been one of the most intelligently active of the members of this organization. His activity has been a result of clear and right faith in the need for such an association and the possible development of milling in this country by a right use of the opportunities that the organization presents to every miller. Without this faith, and right action as a result of right faith, we would not find Mr. Peplow working with so much persistency as chairman of the special committee for the incorporation of the Dominion Millers' Association. He took hold of the matter in August last, and has hung on to it with genuine John Bull tenacity ever since. He believes that incorporation is absolutely necessary to the success of the association, and with his temperament he cannot leave any stone unturned to bring the work to a successful consummation. Does this characteristic tell of a man so set in his own views that no one else can teach him anything? Just the opposite; Mr. Peplow is one of the most approachable of men, ready to receive suggestion and help from any source, and lets one know he appreciates assistance when sincerely given. He is generous to a fault, and imbued with a measure of geniality that makes friends readily, and because of his perfect sincerity and candor, holds them.

MR. EDWARD PEPLOW.

[Written for the CANADIAN MILLER.]

THE MILLER AND THE OIL CAN.

I GOT out of a job in my regular line once, said the oldest commercial man in the waiting-room, and after loafing a week or two I tackled lubricating oils.

I knew little or nothing about the goods, but my employer said "the less I knew the better, that the trade was terribly cut up; I would not find it a monopoly, and all he wanted was a hard worker and an experienced salesman in any class of merchandise."

I tried the regular trade first; was compelled to fall back on the big consumer, who gave but a meagre return, and finally I was forced to work the small mill men. With them I was fairly successful.

One day, some two months after my engagement, I pulled into a small town and proceeded to ferret out its industries. After dropping on to a planing mill and a small woollen mill, I found myself in the doorway of a small stone mill with an ancient sign-board braced to the wall and bearing the faded inscription: "Chopen and Gristen Done While You Wate." About ten feet from the doorway, sitting on a stone with his legs crossed, the left hand testing the chopped stuff as it left the stone, the right grasping a discolored newspaper, sat the miller; rather a forbidding looking specimen—bullet-headed, short-necked and minus an eye.

"Good morning," I warbled in my best salesman's key.

"Well," he retorted, "I know that! What er yer doin' round yere?"

"Oh, ahem! I'm a tourist just round here for pleasure, and I thought I'd like to look through your mill. I never saw one before," I meekly answered.

By this time I had advanced some steps into the building. I was arrested by a growl: "Say, boss, got a boardin'-house? 'Cause ef yer ain't we've got un—good un, too—best roun' these yere pairts; four darters, new thirty-dollar secon'-han' organ, squeaks like old mill when work's plenty—mill squeaks when we've hard work—minds me of good times, it does, every night—drops to sleep larfin'. Got boardin'-house?"

I murmured "yes."

"Say, what's in the bottle, mister?" he snarled. "Red eye?" He withdrew his hand from the chopped stuff, rubbed it on his pants, laid the paper down, and looked the picture of a hyena in expectancy.

A squeaky mill, no oil can or oilers visible, and almost nothing on the shafting, brought up visions of a barrel at least. I pulled the bottle from my pocket and answered: "That's oil, sir."

"What in the Sam Hill is oil? What's it for?" says he.

"To lubricate machinery," I replied. "Try it."

"Lubercate, eh?" he says. "Guess I will try er!"

Suiting the action to his words, he deliberately emptied my pint of oil by going half way round the mill and oiling up.

"Never saw oil before," I ventured to remark, as he waddled back and seated himself on the stool, handing me back the bottle, with—

"Yere. Guess that's good stuff. No, never seed oil afore. Don't 'low nobody kum round yere sellin' truck. Moment drummer reaches that yere door, down kums shotgun, filled with peas, hard uns—fired 'er wanst at one smeart Aleck, 'it 'im right in the stumjack, vomited out in front of mill three days."

Here was I, a hated drummer, right in the lion's den, the opposite of a courageous or a fighting man, inflated with the idea that I could still dispose of a barrel. Ill use a little strategy, I said to myself, and circumnavigate the old brute.

"Where do you get your oil?" I gently enquired. "I have a brother in the business and I might—"

I never got any further. He choked me off by roaring out—

"Say, mister, look yere. Yer the first man ever pulled the wool over my eyes so slick. I makes my grease, ef yer wants ter know. Old woman raises forty geese and fifty ducks every year. I hooks the fat. We eats what's left of seven pigs arter we sells the hams. I grabs all the fat 'cept the lard. We kills two steers; one in fall, t'other in mid winter. We sells everything anybody 'll buy, 'cept tallow—that's mine; boarders eat the rest. Well, stranger, that makes my grease. No, I don't needs any oil. Yer 'd better make tracks, heels t'wards the door."

I thought so too, for he fixed his single eye on the blunderbuss and sat like a stoic with his jaw moving and fingers twitching.

I made my sneak with a "good day."

He never answered.

G.

DOMINION OATMEAL MILLS.

THE business of milling is in no way limited to the manufacture of flour. Of course the universal consumption of bread gives flour milling a precedence over the milling of other products. We have, however, in this country a number of mills of considerable size devoted to the milling of other cereals, and especially of that which occupies so important a place in the preparation of the favorite dish of those hailing from the Land O' Cakes.

One of the leading oatmeal mills in the province is that owned by Gartley & Thomson, of London, and known as the Dominion Mills. The firm is composed of W. T. Gartley and Henry Thomson, both of whom have had many years of practical experience in the oatmeal business. The former has charge of the office and financial business of the firm, a position for which he is well fitted by virtue of the necessary training, and his exact, careful and thorough-going business habits. Mr. Thomson was for a number of years manager of the Seaforth mill of Walter Thomson, having special charge of the manufacturing departments. He knows how to mill only as an experienced and practical miller can mill.

Last spring the mill was thoroughly overhauled, and is now in excellent shape for turning out a good quality of meal. The capacity admits of 150 barrels of oatmeal, 125 barrels split peas, and 25 barrels pot barley per day. The firm does a large home trade, their products having an established and enviable reputation in every province in the Dominion, from Halifax to Vancouver. Their record abroad is just as favorable; the West Indies, South America, England and Scotland being important export centres for their output.

The Forest City has many important industries that have given to it fame and honor in our own land and across the seas. In the firm of Gartley & Thomson it has citizens who are doing their full share by meritorious work to extend this good reputation.

Dominion Oatmeal Mills, London, Ont.

PATENTS AND RED DOG.

BY W. T. BATES, LONDON, ENGLAND.

A QUESTION of importance is the quantity of patent to be made from any given mixture of wheat. Now this modern term "patent" appears to me to be very elastic. It may be made to include anything and everything having a fairly good appearance. The term, no doubt, originated in flour made from purified middlings on the millstone system, and then it had some sort of definite meaning, although in the process there was no sort of patent; but now it seems to include all the flours except low-grade in some mills, and particularly in those mills in America where the term first originated. It may suit the trade there to brand about seven-tenths of their flour patent, and no doubt their excellent wheat gives them fair latitude in that respect, but I feel sure there is quite as much danger of our over-doing this as there is in making too big a percentage. I know some millers boast that they can make seventy or eighty per cent. of patent, but I see nothing wonderful in that and I doubt very much if there is anything in it, after all, from a profit point of view. It is surprising how soon bakers discover the difference which the extraction of an extra quantity of patent makes. Get it up as fine and attractive as you will, the baker is sure to discover that he has only the carcass, that he has been robbed of the interior. There is little doubt that half the flour is the utmost patent that can be made from an ordinary mixture of wheat, and this can be made from purified middlings, leaving a residue of fair-looking stuff for bakers. But in making that quantity of patent all the virtue is taken from the bakers', the bulk consisting of break-flour and the last reductions. It may look fair, but it is surely of very doubtful quality and, to say the least, must be subject to great variation. The more perfect the purification is done and the more scientifically the mill is handled, the more pronounced is the inferiority of the latter-end products. This is indisputable, for in a well-arranged fully-equipped mill all the middlings are concentrated at the top, thoroughly purified, reduced, repurified and further reduced until all the good flour is extracted, and, if this is all taken for patent, he residue cannot be otherwise than poor. If, on the other hand, the mill is badly arranged and unscientifically handled, and a great many are, a good portion of the middlings will pass from various reasons into the lower stages, where they help to enrich the lower qualities, but in that case the patent is not so good. It may be taken as a safe rule that, when a large percentage of very good patent is made, say fifty per cent., the mill is well handled, and that when a small percentage of patent is made which is not very good, as evidenced in either case by the demand, the mill is badly handled or of faulty construction. There is no harm in working a mill so as to make all the flour equal in appearance to patent, but the mistake is made in supposing that it really is patent. A dairy woman might just as well expect all her milk to be cream, or all her cream to be butter.

Besides this, there appears to be another point worth opening out, that is the difference in the nature of the flour made from the different portion of the berry. The middlings may not contain all the best flour, but there is a probability of middlings flour being practically of a different nature to the other flour, and, if they are separated, neither will do so well alone. But, of course, the patent, being purest, will necessarily do best by itself. Where this system is carried to great extremes, as it often is in America, we find that a certain residue called "red-dog" has a totally different taste from the good, pure flour; it is rank and bitter, and made into bread alone, would be utterly uneatable. We see it is only a matter of degree. If that flour in its just proportion were mixed with the other flour as it is made, instead of being drawn off separately, its presence would scarcely be detected, except in the deterioration of color; but mixed with one-third of the most inferior part of the flour, it would be very evident, and even in two-thirds of the flour it would do mischief. It stands to reason that, if we extract fifty per cent. of the finest for patent and leave the residue mixed with this inevitable low-grade, a red-dog for a standard bakers' flour, we can only expect trouble and dissatisfaction among our customers. Authorities say that the flour made at the latter end of the mill, on the bran-rolls and last reductions, especially when worked very close, is not only of a poor color, but that its flavor is bad and that it makes its presence disagreeably evident in the loaf. We can readily believe that after tasting bread made from low-grade or red-dog.

I hold the opinion that a portion of each part of the flour should go into each quality for the above reason. This would necessarily tend to lower the quality of the patent to the bakers', but by the addition of a portion of the best patent to the bakers', the latter would be elevated quite as much as the other is degraded, and thus an even balance would be struck. This I mean when a very large proportion of patent is made, say 50 per cent. and upwards, and which usually is all the best flour down to a certain point. When only a small quantity is made the residue is not affected to any appreciable degree; and if the mill is badly worked it does not affect the latter at all, for in that case a great proportion of the best middlings goes to make the lower qualities, and if the patent is not first-class it shows also that a portion of the inferior flour is mixed with it. I do not, of course, advocate mixing of low-grade with patent, nor patent with low-grade; indeed, it seems to me that what is not fit for the bakers' flour is best in the offal sack, especially at the present comparative prices of flour and offals. A great deal of American red-dog is sold for lower prices than our fine offals realize, and that being the case, it is, I think, best for us to save ourselves the trouble of producing it as a separate commodity. I know some milling authorities advocate the making of about 5 per cent. of low-grade as a separate product, but whether or not this is advisable depends a great deal upon the trade and the comparative prices of that flour and the fine offals. Certainly it is better alone than as a "destroying angel" in the rest of the flour.

The old-time milling was, in many respects, more straightforward and honest than the new, for then the wheat was mixed for a certain flour and, whether well or badly milled, was expected to produce one kind only. Now it is quite different. Modern milling opens the way for a multiplicity of quality and, also, I fear, too many doubtful practices. By the old method the miller had to give his customer the full benefit of the wheat, now he has the thing fully under control, and if the wheat be of a slightly higher quality, can tone his flour down by making an extra quantity of "patent." I do not think this altogether to the advantage of the miller, for all can play at that game. Look at it as we may, the straight flour as it comes from the mill is practically and intrinsically worth as much as it is when divided and subdivided into any number of qualities. If our straight flour is worth 28s. per sack, and we divide it into half patent and half bakers', the two together are worth only 28s. That is, if we get 30s. for the patent we must take 26s. for the other portion. What, then, is the benefit and where is the advantage to the miller? Indeed some, in the desire to increase their margin, have carried this division to its full limit, only to discover that the prospective advantages were far more apparent than real. I am well aware that, as a general rule, when dealing with a British miller the baker gets full value for his money; and, if by chance he find a deterioration in quality, he is now slow in transferring his custom to others. I have grave doubts about the sterling honesty of some of those imported flours, especially of the low grades, and some "straights" from which sixty to seventy per cent. of patent has been extracted.

FRICTION.

THE thesis of some of our practical men in reference to the laws of friction is apparently very faulty, in that the claim is made that the friction of moving bodies in sliding contact, as a shaft revolving in journal boxes, is independent of speed to the extent that it takes no more power to overcome the friction at a fast than at a slow speed. That is a great mistake, and is probably the result of the ambiguous statements made by some of the leading French and other engineers who years ago made a series of experiments for determining the laws of friction. It was found that frictional resistance, or what they were pleased to call the co-efficient of friction, was always the same, weight or pressure being the same, without reference to the area in contact, provided, of course, that all other conditions were equal. It was also determined that this so-called co-efficient remained the same without reference to or independent of speed within reasonable limits, or a speed that would not engender too much heat.

As remarked, that ambiguous statement is evidently the stumbling block of very many students in mechanics. It, however, ought not to be, because most practical mechanics, who have not studied the science of mechanics, know that increase in speed always results in an increase of frictional resistance which demands an increase in power to overcome it. They should then be able to argue from that knowledge that, while increasing speed may not increase the co-efficient of friction, it does not prevent the multiplication of co-efficiency, but, on the contrary, does multiply them in exact ratio to the increase in speed, which demands a like multiplication of power to overcome the increased resistance. When that point is clearly understood the whole question becomes simple.

THE PEOPLE'S MILLS.

IN the Royal City of Guelph, the capital of the county of Wellington, a section of country rich in its agricultural products, is located the celebrated People's Mills, of which James Goldie is proprietor. Mr. Goldie's operations in Guelph date from the year 1860, when he built the Speedvale Mills of that city. This property he afterwards sold, and in 1867 built the People's Mills of the same place. It is of this fine milling property we write.

The People's Mills is an imposing structure, built of beautiful white limestone and furnished with every adjunct necessary to the successful operations of the large business done by Mr. Goldie. To secure every facility both in receiving grain and shipping out a spur line has been built from the Grand Trunk to the mill. The movement of the cars is regulated by machinery fixed in the mill building; much valuable time being economized in this manner.

The mill owes its working power to steam and water, the latter supplied from the river Speed, through five Swain turbine wheels.

The capacity of the mill is 500 barrels per day, which has not unfrequently been run up to 500 and 600 barrels. Three lines of rollers are in use, embracing a total of thirty-four rolls and four runs of stones, which occupy the second floor.

Purifiers, scalping reels, centrifugal reels and other valuable milling machinery take their position on the third floor.

Bolting reels, almost altogether, have control of the fourth floor, where the bran dusters are also situated.

The large product of the mill is packed for shipping from the first floor, every effort being employed, by the use of labor-saving machinery and other modern methods, to simplify the work and thereby economize time.

We hear a good deal in these days of cleaning wheat, and from time to time the MILLER has written on the question. It is all-important to the production of good flour that the miller should have clean wheat. Mr. Goldie holds unequivocally to this opinion, and in an annex to the main building, connected with the second and fourth stories by doors will be found a wheat-cleaning apparatus that effectually does its work.

Consuming the large quantity of barrels necessary to a business the size of the People's Mills, characteristic shrewdness is shown by the proprietor in manufacturing his own barrels. The cooperage is on the opposite side of the river, and the barrels are run into the packing room of the mill by a tramway.

This large and successful milling business is supervised by the proprietor, Mr. James Goldie, and actively associated with him in the management are his four sons James, John, Lincoln and Rowsell. Mr. Thomas Goldie, whose death, as is known to all millers, occurred little more than a month ago, was the senior of five brothers and, up to the time of his death, the active business head.

The product of the mill finds a large sale in the local market. For years Mr. Goldie has shipped extensively to the Maritime Provinces, where the name of Goldie, the miller, is most favorably known. A considerable portion of the output of the mill finds a market in Great Britain, and last year Mr. Goldie was among the leading exporters of flour to Newfoundland.

Remember special general meeting of Dominion Millers' Association, Toronto, Wednesday, March 30, 2 p.m.

THE PEOPLE'S MILLS, GUELPH, ONT.

CAN SMOKE BE BURNED?

AS a matter of fact smoke, at the temperature necessary to ignite carbon, may be consumed, but smoke once created and carried by excess of draught from the hottest part of the furnace onward to the smokestack, may not be consumed. It requires a temperature of 800° to ignite carbon. The answer to the question must be with a view to practical value, and to compress the matter necessary to be understood. For answer we will assume a fresh fire be made and fed with bituminous coal. A large volume of smoke is seen to be given off and hurried by the draught to the smokestack.

Of what is that smoke composed? There is, firstly, the water that is in the coal converted into vapor, and that vapor is the carrier of the matter that we call smoke; that smoke is composed of hydrocarbons, and the more solid matter that is chiefly carbon. Now, bear in mind that the smoke is of the coal a part; yet one part is consumed and the other part escapes as soot and smoke. Why, burning is an act of contact, intermixture, ignition and union, by which the hydrocarbons and the solid carbon in the fuel enter into union with the oxygen derived by the draught from the outer air; that union, to be perfect, must be in scientifically determined proportions; if the air supplied be insufficient, then the union will be limited and the volatile constituents of the coal will pass away as soot; if the air be in excess the temperature will be lowered and the solid particles of carbon from the disintegrating coal will be carried by the draught from the fire-bed unconsumed to the smokestack as smoke.

If the requisite oxygen was supplied in contact with the ignited and igniting coals, then the smoke would be consumed, for that smoke is only comminuted parts of the coal resulting from disintegration of the greater parts, the disintegration caused by the heat resulting from the union of the oxygen supplied and as much of the combustible particles of the coal in a gaseous state as that oxygen can take up.

Now, as combustion is an act of union, there will be no smoke from that which enters into union, and if there be a sufficiency of oxygen to enter into union with all the gases of the furnace, then by their intermixture there will be union, creating sufficiency of temperature for ignition of and combustion of the solid carbon particles, as well as of the volatile constituents; and no smoke.

The answer, therefore, to the question: "Can smoke be burned?" is yes, with the exact required proportion of oxygen in contact with, and intermixing with, the gases in the furnace; without the exact required proportions, and under the ordinary usual conditions of firing, with or without the hundreds of schemes, many of them revived fallacies for smoke-burning, it is not possible to burn smoke in the furnace; that is to say, it is not possible to burn smoke in the furnace except and to the extent of the portion that has entered into union with the oxygen provided by the draught from the atmosphere.

USEFUL INFORMATION

To find length of belt when closely rolled: The sum of the diameter of the roll and eye in inches multiplied by number of turns made by belt, and this product multiplied by the decimal ·1309, will equal length of belt in feet.

When power is transmitted from a central engine by shafting, seldom more than 50 per cent. of the power created reaches the machines, so great is the friction of the best shafting that can be made, having the best care and with the best lubrication. For small places and short transmission this may be reduced to 15 per cent., but when extended to a greater distance it eventually comes to 50 per cent. loss, and as the establishment becomes larger the efficiency of transmission diminishes more and more. A line of shafting two miles long could not, it is estimated, be turned from one end; it would twist itself off before you could turn it.

It stands to reason that if we have an engine fairly well made, with all its parts in line and the valves properly set, it will do its work without a sign, save the sign of the exhaust and the "creep" of the belt parting from the back side of the drum. More frequently we meet with engines whose "chug, chug," as they laboriously pound away at their work, seems to be emulating pile-drivers. The influence steam admission has upon the action of an engine, as regards its noise, is well shown at times in some variable cut-off engines. Within a certain range it works noiselessly, but when additional load is put on and the cut-off changes, the engine pounds furiously. A popular remedy for pounding is keying up connections all round, screwing down the binders on the shaft bearings, or settling up the shocks in the sides of them. In most cases this only makes a bad matter worse; for when an engine pounds from being out of line, the tighter the connections are the harder they bind, and the stiffer they are. Pounding costs money, for it is power thrown away. It is expensive to have a noisy engine, and disagreeable as well. What is easily cured should not be endured.

Many people employed in operating flour mills and grain warehouses are at a loss to determine the hoisting capacity of the elevators used for taking grain and other products from the bottom to the top of the house. A little careful reflection, however, would result in the discovery of a simple and easy method of making the calculation. First ascertain correctly the speed of the head shaft of the elevator, which can be done by counting, as the motions are always slow enough for that, rarely exceeding forty-five revolutions per minute. Then accurately measure the diameter of the head pulley and multiply it by 3.1416, which will give its circumference. Multiply the circumference by the speed already obtained, and the result will be the number of feet of the belt that will pass a given point in a minute. Reduce the feet to inches and then find the cup spaces by measuring from the top of one cup to the top of the next below, in inches, divide into the last product and the number of cups that will pass a given point in a minute is known. Then find out how much each cup will hold, by measurement, and multiply the last product by it, which gives the number of quarts or pints, as the case may be, that the elevator will take up in one minute. Reduce the product to bushels and the problem is solved.

THE Canadian MILLER AND GRAIN TRADE REVIEW

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

ANOTHER FORWARD STEP.

JUST in a word we invite attention to the new department "Mill Products" opened in this number of the MILLER. It explains itself. We look upon the opening of this department as perhaps the most advanced step taken by the CANADIAN MILLER. Where the miller who is not seeking an improved and increased market for the product of his mill? The MILLER will do all it can to give this market to our millers.

LOSSES FROM SMUTTY WHEAT.

SMUT in wheat is an evil that will not stand toying with. A leading Winnipeg grain merchant, who has recently returned from New York, is reported to have said that New York shippers have lost heavily on their shipments of Manitoba low grade wheat to the old country because of the discovery of smut in the grain. "A very large percentage of the No. 2 regular showed a serious damage from this cause, while the No. 1 regular also shows a sufficient damage to spoil its sale in the old country. This circumstance has discouraged the New York exporters trading in Manitoba low grade wheat, and many of them say they are not disposed to handle any more unless it is entirely free from smut. They consider smutty wheat much worse than frosted."

The Winnipeg Grain Exchange has taken up the subject in a healthful, vigorous fashion. It is pointed out that the market for Manitoba and Northwestern grains has been extended to Great Britain and continental countries, and that smut in wheat to the extent that was common to the crop of 1891 will be fatal to an export trade.

An appeal is made to the farmer, in his own interests and the interests of the country, to avoid the "sowing of frosted and other poor seed, and the failure to treat even apparently good seed for smut before sowing." The following illustration is given: "Say a farmer seeds 100 acres. If with frosted or other poor seed the cost will be—175 bushels at 50 cents—$87,50; when good seed will cost—133 bushels at 75 cents—$100, or a difference of $12.50 for 100 acres. Now, experience has proved, from actual tests at the experimental farms at Brandon and Indian Head, that the loss this year by sowing poor seed on 100 acres was, at a very low estimate, $250."

A sample of smut, taken from the cleaning machines of our large mills, was sent by the exchange to Professor Saunders, director of the central experimental farms at Ottawa, and he writes as follows: "The smutty grain you sent is a very bad sample of the bunt, or stinking smut. This can be got rid off to a very large extent by treating the grain before sowing. From experiments carried on at Indian Head this year we are able to submit the following results: Where very smutty grain was sown, about one-half the crop was smutted. The same grain treated in the proportion of a pound of blue stone dissolved in water and sprinkled in ten bushels of wheat, the proportion of smutted wheat did not exceed five per cent. Where one pound of blue stone was used to five bushels, the grain was almost entirely free from smut. Very similar results were obtained last year, both at Brandon and Indian Head, and the importance of this subject cannot be impressed too strongly on farmers. Many cases have occurred this year, to my knowledge, in Manitoba where the grain was so smutted as to be unsaleable, and where it is so easy to remedy this trouble, it seems a pity that farmers should neglect to take the necessary precautions. If the treatment of seed grain could be made general over the province for several years, this disease might be almost eradicated."

After handling several million bushels of the 1891 crop, the Winnipeg Exchange unhesitatingly concludes that the depreciation in value of the crop from smut is fully greater than from frost.

DOMINION MILLER MATTERS.

TWO meetings of the executive of the Dominion Millers' Association have been held during the month both well attended by the members. The Newfoundland troubles were fully discussed, and is made the subject of special comment by the MILLER in its new department, "Mill Products," elsewhere in this number.

The meeting held on 25th February was the first after the death of President Goldie. Feeling reference was made to the matter by Chairman Ed. Peplow and other members; a resolution of condolence to the widow and and family was unanimously passed and the Secretary instructed to send copy of same to Mrs. Goldie.

The question of incorporation was again up for consideration. A draft bill modelled to a large extent on the lines of the constitution of the Toronto Board of Trade had been prepared by the solicitor for the Association, and its terms were with slight amendments approved of by the executive.

A special general meeting of the Dominion Millers' Association will be held in the Board of Trade building on Wednesday, 30th inst., when the draft of incorporation referred to above will be submitted for approval. The meeting will also be open for general business, and as the Newfoundland question is still unsettled, and other important matters have been under consideration by the executive, the meeting will be one of unusual moment and calls for a large attendance of members.

The vexed question of the inspection of Manitoba wheat at Port Arthur was once more the subject of discussion. No two opinions could exist in the mind of anyone, who has a knowledge of this matter, that there are good reasons for complaint. How to get at the trouble is the troublesome question. It cannot be said that any satisfactory progress has yet been made, but this much is certain, that the evil cannot exist for all time, and the persistency with which it is being followed up by the Dominion Millers' Association will ultimately bring success.

A letter received by Secretary Watts from Secretary Barry, of the Millers' Tracing Bureau, of the United States, gives hopes that a remedy may be found for delays at the seaboard. We have made further mention of the subject on another page.

LEGISLATION AGAINST GAMBLING IN GRAIN.

Gambling in grain has long been carried on, more particularly in the United States, in so rascally a manner, the wonder is that determined measures had not been taken before to put an extinguisher upon the business. Congress this term is grappling with the evil in better form than any time in the past. The anti-option bill now before the House is directly levelled against these gambling practices. It has met with some opposition in business circles, for the reason that it was feared that its provisions would operate against the legitimate business of the grain merchant. The Journal of Commerce, of Montreal, remarks here: "The sale and purchase of crops for future delivery, or of any article for future delivery, at a price fixed months before such delivery can be made, may be as strictly legitimate as any other transaction. Where the mischief comes in is in carrying on sales and purchases of articles that do not exist, that are mere counters or chips used as a basis for gambling. As these transactions are carried on outside the market for the goods nominally dealt in; as they are not controlled or effected by actual values, or prospective values, as governed by existing stocks, or the ordinary conditions that affect current market prices, they can be carried on to any extent. Options have been dealt in for more than double the amount that exists of the goods supposed to be traded. Thus the effects of the law of supply and demand, the conditions of which every person can ascertain, are interfered with by these bogus transactions, and honest holders of and dealers in produce, etc., have their business calculations disturbed, and their operations at times disastrously effected by dealings which have no solid basis, which are merely the tricks of unprincipled gamblers."

Senator Washburn has introduced an amendment to the original bill which is expected to overcome this seeming difficulty and yet be unmistakable in its application against gambling. It interprets the word "futures" to mean any contract or agreement whereby a party contracts or agrees to sell and deliver to another or others at a future time, or within a designated period, any of the articles mentioned in section 3 of this act, when, at the time of making such contract or agreement, the parties so contracting or agreeing to sell and make such delivery, or the party for whom he acts as agent, broker or employe in making such contract or agreement, is not the owner of the article or articles so contracted or agreed to be sold and delivered, or has not theretofore acquired by purchase the right to the future possession of such articles or article, under or by virtue of a contract or agreement for the sale and future delivery thereof, previously made by such owner.

Canadian law has quite effectually stamped out grain and stock gambling in this land, the bucket shop being a barbarism of the past. We shall be glad to see our neighbours equally successful in their efforts in similar lines. Public sentiment has, as far as present indications go, effectually banished the infamous Louisiana Lottery, and this other method of gambling should go next.

Grain gambling like most other evils affects others than those who are actual participants in the fray. President Baird, of the Toronto Board of Trade, voiced the best sentiment of the commercial community some days ago, when in strong terms he denounced speculation in grain, adding: "If it had not been for the 'bears,' wheat would be selling at least 10 cents a bushel higher than at present. British dealers seem willing enough to take it, but Partridge keeps them in awe."

MILLING TESTS OF CERTAIN WHEATS.

LADOGA is a wheat that just now is receiving more than average attention from the farmers of Manitoba and the Northwest, and 'pari passu' in Minnesota and other northern countries where climatic conditions are somewhat similar. It had been a wheat that held strong favor with many engaged in wheat-raising in these countries, but of late it is losing in popularity. Because a certain wheat has proved unprofitable in its growing qualities in some particular locality does not 'per se' consign it to universal condemnation as an unprofitable wheat. In the case of Ladoga it is claimed that its failure in some sections is attributable to the climate. A recent test of a very perfect character made at the Minnesota Experiment station can hardly be considered complimentary to this wheat.

The different wheats placed under test were pure Ladoga, pure Scotch Fyfe, pure Blue Stem and Fyfe. The particular test was made with respect to the early re-opening qualities of these wheats.

In the experiments referred to, twenty-five bushels of each of the following wheats were milled, the figures at the right showing the test weight as ground:—

	Lbs.
Pure Scotch Fyfe	63.2
Pure Blue Stem	59.0
Pure Ladoga	57.0
No. 2 Fyfe	61.1
No. 2 Fyfe, slightly bleached	60.0
No. 2 Fyfe, slightly frosted	58.2
No. 2 Fyfe, badly frosted	58.0
No, 3 Fyfe, badly bleached	57.1

The pure Scotch Fyfe was starchy, was A1 hard wheat; the pure Blue Stem was more glutinous. Both of these had been harvested and threshed without any damage being done them. They were raised upon medium soil in the Red River Valley. The rest came from near Hallock, Minn. Nos. 4, 5, 6 and 7 came

from the same farm and were grown from the same seed. Any differences were the effects of bleaching or frost. The Ladoga was the poorest appearing wheat, but chiefly because of its characteristic shrunken condition.

The baking tests made gave the following results:—(1) As to weight of flour required to make a standard loaf, No. 2 Fyfe, slightly frosted, was first, Pure Scotch Fyfe second, and Ladoga eighth. (2) As to strength, Pure Blue Stem was first, No. 2 Fyfe, slightly frosted, was second, and Ladoga was again eighth. (3) As to weight of bread from a given quantity of flour Pure Scotch Fyfe was first, No. 2 Fyfe, bleached, was second, and Ladoga was again eighth. (4) As to color of bread, Pure Scotch Fyfe was first, No. 3 Fyfe, badly bleached, was second, and Ladoga once more was eighth. The Pure Scotch Fyfe bread was bright, rich and creamy, white and of very even texture. The Blue Stem was rich but of a slightly greenish or bluish tinge. The Ladoga had the dingy saffron color of the flour and was quite disagreeable in appearance. The bread from the frosted wheat flours was of a greyish tinge, but the worst of it is reported to have been vastly better than the Ladoga bread.

A CONTRAST IN MILLING.

Elsewhere we have said something of the progressive character of the milling industry in Austria. This compliment cannot be paid Finland, a country otherwise of high civilization, but in a very backward condition as regards milling. The fact seems to be that the peasantry and artisans, who form a large proportion of the population, are anything but epicures in the matter of bread. Wheat, rye, barley and oats are all raised, but of a poor quality, and after being harvested, are dried in kilns. The grain is then taken to the custom mills, which are driven either by wind or water. The millstones are usually of granite and reduce the grain to a sort of greyish brown powder. It is said that neither is the grain cleaned nor the flour bolted. Winter is the busy time with the mills, for in that season the peasantry make their annual bakings, and lay in a store of bread for many months. The loaves are in the form of discs, having a diameter of about eleven inches and a thickness of about one inch. In the centre is a hole some two inches across, which is made that the loaf may be spiked with several others by a staff, on which it is left to dry. When dried it will keep for a "year and a day," but becomes so hard as to defy the mastication of any jaws but those of born Finlanders.

The country has a few mills other than mere grist mills, yet the majority of these are destitute of grain-cleaning and dressing machinery. These are fitted indeed, with French buhrs ; but these good servants are said to be so roughly treated that they soon become useless, and are thrown out of the mill door. From this sweeping condemnation, a few mills, which are in the hands of individuals or companies who appreciate the value of modern milling, are exempted. Finland is very rich in water, possessing 600 falls which are supposed to be capable of giving forth 2,700,000 horse power. At present not more than 35,000 horse power is utilized by the Finnish mills.

SMALL AND LARGE MILLS.

The relationship of the small mill to the large mill has always been a moot question in flour milling. The small miller seldom considers that his ratio of profits compares favorably with those of the big miller. In the present day when large mills are becoming more numerous, and big milling syndicates are in order, additional interest is given to this subject. The small mill is still here, and from the character of the business, is likely, for a long time to come, to be an active factor in milling matters.

We have been told that the reason why the operators of small mills fail to make as much money as the operators of larger ones, in proportion to the volume of business done, is that the operator of the smaller mill does not make as good yields as the operator of the larger mill does, and in his shortcomings on yields may be found the profits he failed to realize.

How to make better yields is the solution of half the trouble. Good machinery and enough of it well operated, and milling good, well cleaned grain is the answer. Good machinery in one mill, well operated, will give just as good results as in another. "If the machinery is the same and the millers are both competent we both ought to get like returns. We will if we have like machines in like numbers. If you have an improved round-reel system in your mill which does high grade work and I am plugging away with an old hexagon, which is not economical, and requires twice the power yours do, your profits will naturally be larger than mine."

"Many millers do not understand how to figure on the relative capacity of break and smooth rolls necessary. Generally they have enough breaks but not enough smooth roll surface to handle the granulated stock, and poor yields is the result. To remedy this defect a competent man must be on the spot. No mill builder can learn by letter what you need, and you had better go to the expense of overcoming this trouble at once because it is expensive and grows so the longer it exists. About half the operators of small mills have not enough machinery of the most important kind. They do not know the grinding surface necessary to make a barrel of flour within a given time, nor do they know how to figure it. If they did their mills would be differently equipped and they would make more money. Crowd too much granulated stock on to the rolls and you send it to the tail end of the mill to become low grade at a big loss.

"Often instead of having two sets of reels to handle two grades of middlings they are run onto one grade of silk with the expectation of making two grades of flour. When the two grades expected don't materalize the miller swears and criticises his mill builder's methods, when, in fact, the mill has been constructed after his own plan, in spite of the protest of the constructing millwright. Many millers are prone to grind wheat not thoroughly cleaned and expect to make high grade flour. It is absolutely necessary to have good cleaning machinery and plenty of it. To make high grade flour the fuzz must be taken off wheat. If the grain gets to the break rolls before that is done goodbye to all high grade expectations, for though that flour went to London market the fuzz would be in it—you can't overtake the injury done by bad or no cleaning, no matter how good or how much other machinery you have."

EDITORIAL NOTES.

THE delegation from the Dominion Millers' Association that visited Ottawa a week since, re. the Newfoundland difficulties, interviewed when there the Minister of Inland Revenue concerning certain changes in the Inspection Act. This matter, it will be remembered, was discussed very fully at the general meeting of the Association. It is asked that the Dominion Millers' Association have representatives on the Boards chosen for the selection of standards of flours. The Government is also asked that the standards be selected twice a year instead of once. Experience has shown that the original standards bleach so much in course of time that injustice is done the milling trade in making one standard the standard for the whole year. The suggestions, in part at least, are favorably viewed by the Government, and some of the desired changes will no doubt be made.

THE London, Eng., Times, in an editorial article, makes the following comment concerning Russian matters: "In another column will be found a further instalment of the correspondence which we have published from time to time, giving an account of the Russian famine-stricken districts, which is, indeed, bad enough to awaken compassion and to silence criticism. At the same time we see no reason to recede from our opinion that the crisis is not one that justifies a national movement here to collect subscriptions in aid of the sufferers, who, it must be remembered, are the subjects of a paternal despotism that undertakes the whole burden of responsibility for those under its rule, and is peculiarly resentful of the interference, however well meant, of other people. The Russian Government raises an enormous revenue and borrows largely for military and other purposes. It is unquestionably capable of providing for the elementary wants of a population to whom the elementary rights of citizenship are denied. This duty is much more incumbent upon an autocratic Power than upon the Government of a free state, where men are expected to help themselves and are able to do so."

MR. M. J. GOLDIE, son of David Goldie, of Ayr, Ont., who recently visited a number of the larger mills in the United States, is reported by the St. Louis correspondent of the Northwestern Miller to have said: "Since the mill has started they have never been obliged to shut down for lack of buyers. They place but two grades of flour on the market—straight and low grade. The straight goes to local consumers direct, while the low grade the poorer classes of French Canadians take. The latter trade has a peculiar fact connected with it which is interesting to our own millers. The flour is packed in the poorest of cotton sacks and sold unbranded. This allows the consumer the opportunity to replenish his wardrobe at the same time that he buys the flour, for the unbranded cotton sack when empty requires but small alteration to make any article of dress the French Canadian may be in need of. In this lies the secret of the low grade flour trade in Canada. Barreled low grade flour is unsaleable, but unbranded sack flour is eagerly bought."

* * * *

"They tell me I'm a kicker," said Mr. John Brown, of the Citizens' Milling Company, one of the best known figures on Toronto 'Change, "but it would be a sorry look out if there was not some one around to do a little kicking occasionally." And Citizen Brown is right. Human nature is strangely constituted. Things would work poorly enough if all temperaments were alike. Your sanguine spirit is a good man to send an enterprise along at a booming speed, but he is apt to run it into the ditch, unless drawn up sometimes by one of a less enthusiastic build. Some men are Quakers by instinct, and peace at any price is their motto. Their disposition is delightfully pleasant and they are usually as well loved as they are lovable. But many a good work has been run to the brink of the precipice because of the easy going spirit of these people. It is not always safe to take everything said for gospel. The millenium is not yet here, and a few individuals of designing character, ready to wrest affairs for their own end, are still around. The courage of the kicker may well be envied on these occasions. The kicker is a useful individual, all power to his nerve. I might give you a score of other reasons for saying this, but any man, who has seen anything of the world and its ways, knows these without my telling. At the same time we should be sorry for the community with too many kickers to the square acre.

* * * *

One of the sights of 'Change for many months past has been the sportive pranks of not a few of the grain members of the Toronto Board of Trade. To one not knowing just what quarters he had dropped into, he might form all sorts of conclusions, seeing as he would, between the hours of twelve and one o'clock, a throng of the leading business men of the city in the roomy quarters of the new building, corner Yonge and Front streets, where they are wont to meet at that hour, chasing after one another and each endeavoring to get the biggest fistful of grain down the others back, and peppering one another from all points with showers of No. 1 hard, the brightest Canadian barley, or whatever cereal was found most ready to hand. There they were, the coldest day in winter, or when the thermometer registered the highest mark of the season, with coats closely buttoned and collars turned up to ward off, if possible, the hostile attack of a brother grain man. Frequently even big boys carry their nonsense too far and must be suppressed. The following notice, found in conspicuous spots on the walls of the rotunda a few days ago, has proven the squelcher in the present case:—

NOTICE—Members will please note that the Call Board Committee have instructed the caller to report any member throwing grain about or in any other way disturbing the proceedings of the Exchange. Section 15 of the Call Board regulations will be strictly enforced. By order

JOHN CARRICK, J. L. SPINK, M. MCLAUGHLIN.

VIEWS AND INTERVIEWS.

The Millers' Clown.

Some day the millers of this North American continent may see the necessity of securing a miller's clown to while away an occasional idle hour, as did the kings of olden days. In the interim the place is being ably filled by the Milling World, of Buffalo, N.Y., though the tricks and jokes of his clownship are sometimes both broad and coarse. We congratulate our neighbor that for twenty-five years he has filled this position without a rival or an effort of any one to dispute his superiority in his own chosen line of milling journalism. Entering this month upon his twenty-sixth annual round, with the whisperings of old age creeping upon him, may he continue to reign supreme, and the foolishness of his intellect never forsake him. And though his chief condiment shall be a perpetual abuse of all things British, and his ravings be wilder than a Dakotian blizzard, he shall be forgiven, for who would abuse his own intelligence by abusing the clown of the ring.

What They Eat.

A sample of the bread being eaten by the Russian peasants has been forwarded to England and an analysis made of it by the London Lancet, probably the highest authority in medical journalism. The specimen is considered to be above rather than below the average quality. It is described as "dirty brown in color, and looks like coarse peat. It was evidently rye bread and as such could not be otherwise than dark in color. On fracture a slightly earthy and sour smell was observed, but with the features which characterize rye meal. Coarse particles of husk, leaves and small seeds could be seen with an ordinary lens." The analysis gave the following results expressed in parts per cent.:

	Per cent.	
Moisture		22.22
Organic Matters:		
Starch	35.33	
Sugar, gum, etc.	10.01	
Nitrogenous substances	14.81	
Woody fiber	10.40	
Fat	1.60	
		72.15
Mineral matters:		
Silica, sand, etc.	2.50	
Alkaline carbonate, with small quantity of phosphate and chloride	2.00	
Lime salts (phosphate)	1.13	
		5.63
		100.00

We can quite understand, as the Lancet says, that "many persons to whom we showed the samples failed to recognize that it was bread at all."

Murder of The Miller Maiden.

The dusty miller, and more especially the dusty miller's daughter, has, all through the ages, been a favorite subject for the pen of the poet, albeit that some of this poetry has had to run the gauntlet of good, bad and indifferent. Tennyson has sung her praises in three of the prettiest stanzas he has written. The editor of a milling journal, published on the other side of the custom line, has made the discovery, however, that the average mill poet "must always murder the maiden in his poems," and he protests accordingly. Accepting the result of his research as correct we join in the protest, for why should the miller maiden who, in the words of the Poet Laureate, has:—

> —Grown so dear, so dear,
> That I would be the jewel
> That trembles at her ear,

suffer these indignities and cruel persecution? Our contemporary goes on to say: "In a hundred poems devoted to the mill, the water, the maiden and the lover, at least ninety-nine of the maidens are made to drown themselves in the mill-dam, and it is generally a close shave with the unfortunate undrowned one whether she wouldn't be better off in a drowned condition. Why all this bloodthirsty tragedy and savagery in the mill poet and mill poems? The old mill, the old miller, the placid dam, the romantic race and the singing wheel ought to suggest peace and happiness, but they seem to madden the poets so that nothing but the gore of the maiden will pacify. It's all a mystery to us, and we would like to see or hear a solution of the perplexing problem. Can any one suggest a solution?"

Educated Millers.

The German is nothing if not a believer in educational methods. His thoroughness in this particular stands out sometimes in conspicuous contrast to the superficial character, less or more, of the work we undertake in this newer country. This is most noticeable when we get outside of the ordinary educational system and examine his industrial, technical and military system. He believes in an educated soldier, an educated civil officer, an educated workman. He may be slow, but he is rarely else than sure. The millers are the latest body of workmen who have asked the State for aid in this direction. There are, according to a petition to the ministry of public instruction, 25,000 mills in that country, 5,000 of which are merchant mills. Milling is the leading industry of the Austrian empire and the only industry without a public school and experimental laboratory. The petition asks for the establishment of a national milling school, to be aided by the Government.

Not All Alike.

"I have lost all interest in advancing the work of this shop and my sole ambition is to put in ten hours per day and draw my pay Saturday night. I am entirely done with all ideas of trying to advance the interests of my employers by brain labor or improved methods of doing work. The firm has several of my devices which save it many hundred dollars per year. I have received several kicks, but no thanks, in connection with these matters; therefore, I am done with such business." This is the way an intelligent mechanic recently expressed himself. He was a good workman and a practical inventor. His effort had been to throw enthusiasm into his work, but it had met with no appreciation, and he had become soured. Forever after that man is likely to have a poor opinion of the employer of labor. Judging others by his own experience, he will consider all as simply task-masters, oppressors of the workingman, getting out of him everything that is possible, giving in return as little as he can, not even supplementing the pittance that may be paid by a word of kindness. Yet all employers are not alike. There are employers possessed with a generous supply of the milk of human kindness, whose thoughts are constantly working in lines that will help to make life more worth living to those who, by their enthusiasm, intelligence and labor, are no inconsequential factors in creating the fortune the employer is piling up. A broad sympathy, and a killing of the narrowness of view that too often takes hold of employer and employee, is what is wanted the world over between man and man. It pays—has paid where ever tried.

The Moloch Of Modern Business.

Are we living too fast? The question is not new. But we go on living; have we settled the problem? Hardly, unless everyday observation more than belies the record. This Corner of the MILLER is not given to moralizing. The aim of each paragraph written is to get at something thoroughly practical, but the observation of a neighbouring commercial journal "catches us" as having a very practical bearing, while possessing a strong moral coloring. "It was once the custom," says this representative of iron and steel, "to offer sacrifices to Moloch. The offerings to this gentleman were not of jewelery, vegetables or cash, but of human lives, served up on a hot coal or in a bloody basket. The altar of this man-eater was a shamble, in which the patriarch and the babe, the rich and the poor, the wise man and the fool, went into ashes and mincemeat without fear or a coroner's jury. We are fortunately living in better times. The butcher's shop is closed, and Moloch is out of business. The modern man is no longer served on a gridiron or a plate to a cannibal god. We are, however, doing some occasional whittling on the old block. In a refined and conventional fashion we are offering sacrifices of time, health and mentality to a modern Moloch. This last and improved addition of the man-eater is overwork. We live in a rapid age. The clock is too slow and the days too short. We spread a mile of life on a yard of time, and by burning the business candle at both ends the light goes out in the middle instead of at the bottom. Business is a race-horse seldom in the paddock, but mostly on the track. Everything moves under the spur and whip. In the totals of progress we have forgotten the invoices of human life. The commercial structure is immense and magnificent. We spread printers' ink in statistical Te Deums and are patriotically proud of our national supremacy. But under the superstructure is a catacomb and on the back page of business statistics an extended list of lunatics and invalids and a growing pile of undertakers' bills. Attention has been called to this fact by physicians and publicists, but the underground railway to asylums and cemeteries is still running on time and paying dividends. In the modern conditions of business, it seems to be necessary for some men to be sacrificed for the rest. They are pivotal in their different vocations. When the king-pin is missing the wagon stops. Such men labor beyond the limits of reason and the endurance of nature. Life is a file of invoices. Rest is simply an anxious man sandwiched for a few hours between two sheets, with broken nerves, delinquent health and spells of sleeplessness and nightmare. Artificial remedies are resorted to in order to postpone the usual catastrophe. Opiates, capsules and stimulants are used to stop the cracks in a leaky ship, with the usual finale, in a heavy cargo and a dead captain. There may be an excuse but there is no disguise for this fact. It is deplorably common. Overwork is becoming a public enemy. When business men are conscious of its encroachments on their vitality, they should wisely call a halt, not forgetting that even in this age of cupidity a bank account and a big business is no offset to premature exhaustion, a soft brain and a short life."

Wiman Talks to Millers.

The views of Erastus Wiman on his pet subject of Commercial Union are known, we suppose, to every reading Canadian. Having prepared, however, a special paper on this topic for that distinctly milling journal, the Northwestern Miller, it is just possible that millers may be disposed to read Wiman afresh, and discover, if possible, a new thought. The article covers over four columns of space, and he retraces all the well trod ground of the past. Coming more directly to the matter of the food supplies of the two countries he says it is "most fortunate for the people of the United States, exhausted as are their areas, and pre-empted as are their opportunities, that right beside them is a country equal to their own in size, possessing potentialities of wealth second only to her own, and ready for an expansion of trade of continental dimensions. Fortunate, too, for the United States that right beside them should exist this great land, so that, keyed up as they are to a rate of progress in manufactures, in railroad building and equipment, in production of machinery, and in all that goes to make up a progressive commercial community, there may be room for growth at the pace heretofore set, so that the new century may not witness a decline in percentages of increase from those which the last decades of the old centuries set in motion. All the natural resources to keep this great community in motion exist in Canada. As sources for food supply Canada possesses requisites for even a greater output than in the United States. In iron, copper, nickel, gold and silver; in coal on the Atlantic and Pacific and midway across the continent; in fisheries unapproached by those of any nation in the world; in timber in unlimited supply, and, above all, in agricultural areas of the widest and most productive character, the Dominion of Canada possesses just the things most needed by the United States, and in localities more desirable for her greatest need than could be otherwise provided, except by a Divine Providence, having in mind the creation of a great nation on its southern border. In ancient times the countries of the old world sent out their adventurous traders to discover new worlds for the purposes of trade. Columbus, Cabot, Magellan, Sir Walter Raleigh, Drake and a host of others added to the world's wealth the increase. The growth of population is as certain as the sun, the growth of food-producing area has reached its limit, and it will need a revolution in modes of culture, with the occupancy of all waste places, to keep up with the increased demand that is certain to set in. Even with this revolution and this occupancy, the future food supply will be inadequate for the enormous increase in the demand that impends, unless outside territory is made available."

WM. & J. G. GREEY

CHALLENGE THE WORLD

TO EQUAL

The Greey System and The Greey Machinery

They Can't be... Beat

They are Reliable

Give Satisfaction

Prices Reasonable

See this Testimony - - -

Utopia Roller Mills, J. R. Bell and Bro., Proprietors

UTOPIA, Ont., February 15th, 1892.

WM. AND J. G. GREEY, Toronto, Ont.

Gentlemen,—We have got our mill started again, and consider we now have the best short system mill in this country. The new set of rolls and Little Wonders materially increase our capacity and make a good finish. Will you please send us statement in full of our account and we will remit.

Yours truly, J. R. BELL AND BRO.

We Lead the Times for High-Class Machinery

ARE KEEN FOR GENUINE IMPROVEMENTS

WM. & J. G. GREEY

2 CHURCH STREET

TORONTO, ONT.

ORDERS, CORRESPONDENCE AND ENQUIRIES INVITED AND ATTENDED TO PROMPTLY

WE ARE CANADIANS AND KNOW HOW TO MILL CANADA WHEAT BETTER THAN FOREIGNERS

IT'S A DANDY

THAT

LITTLE WONDER REEL

THE GREATEST MACHINE TO BOLT EVER INVENTED

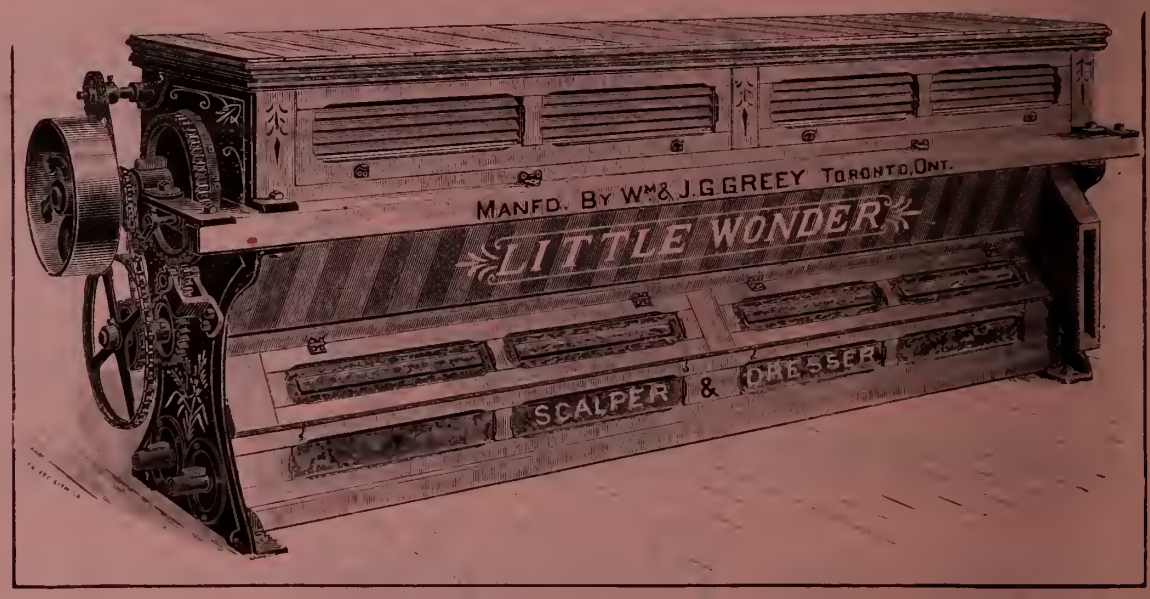
Campbell and Stevens, Chatham, order one

Heimbecker and Ziegler, Hanover, order one

John Munro, Cornwall, Ont., orders one

Patch and Armitage, Richmond, Que., order one

And this is how.....
.....they all please :



MILDMAY, Ont., February 16th, 1892.

MESSRS. WM. & J. G. GREEY, Toronto, Ont.

GENTLEMEN :—Regarding the Little Wonder Reel I purchased from you, I am well pleased with its work. I am sending to it the low grade and all the dirty stock from the other reels. The flour bolted by it is bright and clear of specks. I am finishing up closer than I did before, and am not making half the low grade I did, and what I do make is better in quality. It has plenty of capacity. I am running it with a three-inch belt.

Yours truly, H. N. SCHMIDT.

The Little Wonder is a Money-Earner from the Start

Is Unequalled for Making Perfect Separations

NOTHING CAN TOUCH IT FOR BOLTING
OR RE-BOLTING ANY STOCK IN THE MILL

IMMENSE CAPACITY

So small it goes anywhere . . Runs so easy, no trouble to drive

ORDERS PROMPTLY FILLED

++ SOLE ++
MANUFACTURERS

WM. & J. G. GREEY

2 CHURCH ST., TORONTO

P. Campbell, grist mill, Lachute Mills, Que., has assigned.

Sixty-five millers are members of the Toronto Board of Trade.

P. McIntosh & Son, wholesale flour and feed, Toronto, have dissolved.

The farmers at Macdonald Station, Man., are talking of building an elevator.

W. R. Cahoon will remove his flour mill from High Bluff to Portage la Prairie, Man.

Morden, Man., up to ten days ago, had shipped 465,000 bushels of grain for the season.

Jacques & Douglas, flour and grain, Ottawa, have dissolved. A. Jacques continues.

There is talk of the Columbia Flouring Mills Co. building another mill at Swan Lake, B.C.

Band & McDonald, late of the Pilot Mound mill, have leased the mill at St. Leon, Man.

The farmers of Hartney, Man., will offer a bonus of $5,000 to a good flour mill of 150 barrels capacity per day.

The Northwestern Sampling and Milling Co. (limited) has been incorporated at Nelson, B.C., with a capital of $100,000.

W. E. Ellis & Co. have purchased the Oshawa Milling Co.'s mills, and business under the new management is brisk.

The annex to elevator A, Fort William, Ont., is about ready for wheat. This increases the storage capacity there by 1,250,000 bushels.

It is reported that Mr. Muirhead, of Pt. Arthur, Ont., will, if he gets favorable terms, establish flour, oatmeal and pot barley mills in Calgary, Man.

Peter Quance, proprietor of the grist and sawmills at Delhi, Ont., has formed a partnership with his brother Robert, the style of the firm being Quance Bros.

The Winnipeg grain exchange has established a charity fund, not for bursted grain men, but for general charitable purposes. The members have subscribed five dollars each to the fund.

It is said on good authority that, provided a sufficient bonus is offered, a flour mill with a capacity of 150 barrels per day will be erected at Rounthwaite, Man., this spring.

J. G. Snetsinger, of Moulinette, Ont., is having his mill remodelled throughout on the roller process; capacity 100 barrels a day. The work is being done by the North American Mill Building Co., of Stratford.

Messrs. McGuffie & Chapel, of Gabriola Island, B.C., have taken advantage of the present open and mild season, and seeded down about twenty acres of oats. This speaks well for the climate and the enterprise of B.C. farmers.

C. O. Card, of the Mormon settlement, Lee's Creek, Alberta, N.W.T., has been to Utah, and brought with him a practical miller to run the grist mill recently established in the settlement. He thinks there will be a considerable influx of well-to-do immigrants from that State to Alberta next spring.

A sample of what is known as Campbell's white chaff wheat shown on 'Change at Winnipeg, Man., a few days ago, has won much favorable comment. It was grown at Red Deer, Alberta, and was sent by Prof. Saunders, director of the Dominion Experimental farm.

W. Kitson and K. McKenzie, of Burnside, Man., have been to Winnipeg as delegates from the Burnside Farmers' Elevator Co., interviewing the Canadian Pacific railway officials respecting a site at the above-named place for an elevator which the farmers will erect there during the coming summer. The elevator will have a capacity of 50,000 bushels.

The Edmonton district, Alberta territory, will not do much longer without a roller mill. Mackenzie, Ross, Holt, Mann and Nanton are the applicants for letters patent incorporating a milling company with a capital of $35,000. The parties named are all capitalists, who own a large amount of land at Edmonton, and who are, therefore, desirous of furthering the welfare of the town.

No little surprise has been caused by the report that a shortage has been discovered in the flour mill of Messrs. Pearen Bros., Brampton, Ont. The managers declare that from the quantity of wheat purchased and taken to the mill since Aug. 7 last—about 50,000 bushels—there should have been upwards of 750 barrels of flour more than the quantity accounted for. After investigating the facts the proprietors have concluded that the flour must have been stolen from one or other, or both, of their storehouses.

On the 9th inst. Mr. James Pethick, who lives about three miles west of Millbrook, Ont., was using a grain crusher. He leaned over to try the feed to see if it was being crushed fine enough, when the sleeve of his frock caught in the gearing of the machine and, before the horse-power could be stopped, the flesh from the wrist to the elbow was stripped off to the bone.

A recent visitor to this province has been Mr. R. A. Janes, of Calgary, Alberta, who, among other objects, has been endeavoring to influence some person or persons to start a flour mill in this Northwest town. The present consumption of the community is 105 bags a day and growing rapidly. In 1882 the population was 100; in 1892 it is 4,123. The municipality is prepared to offer inducements to a good man.

The new town of Carnduff, Man., has added to her already large grain storing capacity another warehouse erected by Mr. Sproat. There are six grain dealers: Ironside, representing N. Bawlf; R. McGuire, for the Lake of the Woods; W. A. Smith, for Roblin & Armitage; James Sproat, for J. K. McLennan, and A. N. Shaw, for Harris & Grant. The average delivery of wheat is from 1,000 bushels upwards and it is of an excellent quality.

A new claimant for prominence as a wheat city of the Northwest is Hamiota, Manitoba. The country now tributary to Hamiota formerly was the chief support of Virden, Oak Lake, Rapid City and Shoal Lake. There are several townships south of Hamiota which are equal for wheat-raising to any in the province, while to the north the country is excellent for mixed farming. The building of the Great Northwest Central Railway has had much to do with this progress.

The Lake of the Woods Milling Co., is preparing for an active season in extending its operations. The Keewatin mill is being increased in capacity between 200 and 300 barrels, to 1,800 barrels per day. The Portage mill is being supplied with a new plant throughout, and will be increased to 600 barrels, or double its former capacity. The company also proposes erecting ten or twelve new elevators this year, with the object of doing a shipping trade in grain, as well as a milling business.

A peculiar and fatal accident occurred at Essex, Ont., on the 2nd inst., by which Laurence Wigle, aged thirteen, lost his life. He was playing in Green's warehouse, where men were employed in removing grain from a large bin. Climbing to the top he jumped in, thinking to have a slide on the swiftly disappearing grain. In a moment he was drawn into a mass and not until his feet appeared coming through the spout fifteen minutes later was it known where he was. Life was extinct when he was recovered.

According to the annual report of the Winnipeg Grain and Produce Exchange the estimate placed upon the wheat yield of the province for the past year is 21,000,000 bushels. This is nearly double the crop of the preceding year, which, up to that time, was the largest on record. The grain storage capacity west of Lake Superior, on, or adjacent to, lines of rail, is now 10,366,800 bushels, of which more than 9,000,000 were provided by the C.P.R. There are in the province forty-two flour mills, with a total daily capacity of 7,455 barrels, and three oatmeal mills, which jointly can turn out 300 barrels daily.

Mr. McKay, of Indian Head Experimental Farm, delivered a lecture in the agricultural hall, Grenfell, Man., on the 1st inst., in which he gave an interesting account of some of the principal lines of work carried on at his farm. His remarks on smut and frozen seed were listened to with attention. His candid opinion that more money would be made in the long run if the farmers did not try to do too much, consequently put in a good deal of grain too late, was heartily endorsed. His opinion of Ladoga is now below zero and his advice is to stick to the Red Fyfe until some new variety is unquestionably proved to be an improvement.

The Manitoba department of agriculture has arranged for a system of grain exchange by which farmers throughout the country may secure a supply of seed wheat free of cost. Those who wish to take advantage of this arrangement will have to send in a quantity of wheat, the amount they require for sowing, and state from what part of the country they would like to procure a supply of seed, and the department will forward to them by freight what they require. The grain will be received at, and shipped from a warehouse in the city, which will be in charge of a competent man. The grain to be exchanged must be up to the standard called for by the Winnipeg grain exchange, and will have to pass the inspection of the Winnipeg grain inspector. The object of this exchange is to give the farmers an opportunity of procuring fresh and sound seed and to further the efforts now being made to eradicate the smut evil. Consignments of wheat sent under this arrangement will be carried free by the C.P.R., M. & N.W., and probably the N.P., and G.N.W.C., and should be addressed to the care of the Department of Agriculture, Winnipeg.

The piling for the foundation of the new Allis mill at West Superior will probably be completed this week.

A flour war has been raging at Blunt, S.D., the price in four days having dropped 80c. per 100 lbs., being quoted at $2 per sack of 100 lbs.

The Dundee Courier's Calcutta correspondent says that the jute crop in India is exhausted and that the total shipments to Europe will not exceed 1,650,000 bales, which is nearly 1,000,000 bales short of last year's shipments.

Both France and Belgium report frost-killing of the winter-wheat plant. In France the damage is estimated at ten per cent. in some of the northern departments. Russian rye and wheat crop conditions are reported bad in many provinces.

Rhode Island is to build an "Old Stone Mill" at Chicago as a part of its exhibit at the world's fair in 1893. It will be an exact copy and of similar size as that which has added so much to the general attractiveness and historical interest of Newport.

The Board of Agriculture of Great Britain reports a decrease of wheat-growing area in Scotland of fourteen per cent., in Wales ten per cent., in the southwest of England nine and one-half per cent., and in the rest of England two per cent. The decline is mainly in districts where the crop is grown under less favorable circumstances.

The effect of reciprocity upon American export flour trade is seen in the increased imports, during January, by Cuba. The imports at Havana from the United States were 62,371 sacks, against 2,720 sacks during January, 1891. The imports from Spain during January, 1891, amounted to 38,490 bags, but none was imported during the same month of this year.

The grain production of Wisconsin is confined largely to barley, corn and oats, and the wheat acreage is being reduced, stock and dairy farming being in favor. The drouth, however, has cut down the yield of coarse grains, and dairymen have been compelled to import corn, oats and millfeed. As an illustration of this, it may be mentioned that Westfield, in Marquette county, received thirty carloads of feed last month.

According to the Bombay Gazette there are good reasons for believing that the extraordinary activity which marked the export of India wheat in the last campaign will be witnessed again this year. The rainfall in the central provinces has been exceptionally beneficial, and the appearance of the crop is satisfactory in the regions traversed by the great Indian Peninsular and the Nagpur-Bengal lines. Considerable sales have already been made, and March, April and May will certainly bring redoubled animation in transactions before the European and American crops are harvested.

A miller, writing from Queensland, expresses the opinion that his colony will soon compete with the others as a milling centre. He says that the southern colonies have certainly got a start both in wheat-growing and in milling machinery, but that Queensland is coming up fast, that the farmers are satisfied with their crops this year, and that more land will be put under wheat next season. Southern millers, he says, are making inquiries about North Queensland, and he speaks of several new mills starting in North and Western Queensland. He thinks the Queensland wheat is as good as that grown elsewhere, but complains that the farmers are careless, and allow a good deal of barley and oats to get mixed with the grain.

J. H. Johnson, the owner of a fifty-barrel flour mill at Blakely, Minn., and a devotee of Farmers' Alliance doctrines, has created a good deal of comment in this neighborhood by issuing a letter to the farmers urging them to organize a Farmers' Alliance Milling Association. He has printed and circulated thousands of his three-column document, the burden of which is to show that the farmers of the Dakotas and Minnesota have lost $28,000,000 on the wheat of the last crop up to the ninth of December, 1891. He then proceeds to show the farmers their folly in not building their own mills and thereby securing $1.00 a bushel for their wheat, with a ton of feed per hundred bushels, together with some minor advantages. Any community that can deliver 75,000 bushels of wheat, he says, can thereby keep a fifty-barrel mill running for a year, and the mill can be built for almost $7,000. That, Mr. Johnson says, will secure $1.00 a bushel for every bushel of wheat raised by the shareholders. Mr. Johnson would allow fifty cents a barrel for the handling of the flour, and the agents he would send abroad to dispose of it would be the farmers' sons.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot harley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

NEWFOUNDLAND MATTERS.

WE cannot report that any immediate and certain progress has been made in the settlement of the Newfoundland troubles since the issue of the February MILLER. The outlook, however, is some brighter now than then. The activity of the executive of the Dominion Millers' Association, together with that of the Boards of Trade, of Montreal, Halifax, Winnipeg, Toronto and other business centres, is having an influence on the Government. They realize, as never before, that important commercial interests will be seriously jeopardized by any delay.

During the month two meetings of the executive of the Dominion Millers' Association have been held, fully attended by the members. The question in all its bearings was dispassionately discussed. Whilst everyone felt that no time could be lost in securing a settlement of the difficulty, yet anything that would seem to partake of imprudence, or that would lead to greater complications in the future, preventing, possibly, a satisfactory settlement for all time to come, was with one voice discouraged.

A suggestion of the Montreal Board of Trade to ask the Canadian Government to endeavor to arrange a modus vivendi, whereunder the trade in certain products in Canada and Newfoundland may be maintained until the questions at issue between the two Governments are settled, was favorably considered by the executive and they decided to co-operate with Montreal and other boards willing to press the matter on the Government from this view. On the 10th inst. a deputation consisting of J. T. Morris and A. Kingman, Montreal ; W. Scott, Ottawa, and the following representatives of the Dominion Millers' Association : Ed. Peplow, Peterboro; J. D. Saunby and C. B. Hunt, London; A. H. Baird, Paris; M. McLaughlin, Jno. Brown and C. B. Watts, Toronto, visited Ottawa with this object in view. In a measure the visit was fruitless, as an intimation was received from the First Minister early in the day, before the deputation went up to Parliament Hill, that it was desired by the Government that they should not make any reference to the Newfoundland difficulty, for the reason that to bring pressure to bear at the present moment on the Government would only afford a pretext to the Newfoundland Government for delaying the settlement, with the expectation that the Dominion would finally be compelled to grant all the concessions for which the Newfoundland Government is anxious. The deputation deferred to the request of the Premier, but not without expectations that the Government would pursue the matter with the vigor and dispatch that the urgency of the circumstances demand. This is the position of affairs at the present writing.

The Minister of Fisheries in answer to a question from Mr. White, of Shelburne, N. S., referring to an address delivered before the Halifax Board of Trade by Hon. A. W. Harvey, member of the Government of Newfoundland, said that the whole matter in its different relations was under consideration by the Government, and that all papers and correspondence would be brought before the House at an early day. Mr. Harvey in his address made this statement : "If the Canadian duties on Newfoundland fish are removed the Newfoundland duties on Canadian products will come off automatically." The Halifax Board of Trade were one with Montreal and Toronto in the suggestion of a modus vivendi as a solution of the troubles in the meantime.

Mr. Sam Hughes, member for South Victoria, has moved for a return showing the quantity of Canadian flour exported to Newfoundland in 1890 and 1891 ; the law and regulations of the Newfoundland Government relating to the importation of flour, and the quantities of Canadian cattle, beef, pork, hogs and cheese exported to Newfoundland in 1890 and 1891 ; and also for a return of correspondence showing the action taken by the Canadian Government to secure the admission of Canadian flour into Newfoundland under fair regulations. Hon. Mr. Tupper in answer said that both questions were touched in the correspondence which would all be brought down in one return.

The longer a settlement is delayed the more serious the case becomes for Canadian millers. American millers, as might be expected, are bidding for the trade, and using the circumstance of the antagonistic duty on our flour for whatever it may be worth. Here is an extract from a letter written by an Iowa miller, and received by a Montreal exporter, who shipped largely to Newfoundland : "I write to ascertain what the prospects will be to get our flour in Newfoundland trade the coming season, as I note in the papers they have put a heavy duty on Canadian flour of $1 05 per barrel as against 30 cents on American. I send you samples."

Millers would act wisely by writing their representatives in the Commons and have them fully prepared to discuss the question when it comes before the House.

FOREIGN FLOUR CHANGES.

A trade contemporary, the Market Record, has an article in a recent issue pointing out the change that has come over the flour markets of Great Britain. The time was when "Great Britain was the greatest outside market for Hungarian flour, but that is lost." Immense quantities of fine patents have been sent over from America and the consumption of fine Hungarian flour has been greatly affected. These Hungarian flours have met with serious competition in France also, as well as other countries on the continent. The whole world is disappointed in the price of wheat and this is the cause of the trouble.

"The Pesth millers," says the Record, "expected too much and their flour has not sold as usual in the United Kingdom, nor has it moved well in other foreign countries. They reduced their prices reluctantly this month, without attracting much attention to their flour from abroad. Hungarian millers were much as Minnesota millers were when the local markets were forced up on small wheat production at home, with the expectation that the world would be swung on local hinges. Hungary is tasting the agony we did not relish in 1889, but had to swallow, for the price of wheat had been worked up where it had to stay for apparent reasons. A reduction of output to home wants is perhaps the only way out of it for them." Are not these changes suggestive of possibilities for Canadian flour?

A TRACING BUREAU WANTED.

Prompt shipments and equally prompt transportation are vital to a successful and satisfactory export trade. Canadian millers are thorough-going business men and orders placed in their hands can be sure of immediate attention. Unfortunately, perhaps, they cannot travel with the flour after it has left the mill. They have to rely on others for expedition in transportation, and this is too often the most sluggish part of the business. For years they have had to contend against delays in transit and at the seaboard. It cannot be said that they have yet overcome all difficulties, though it may be that things are not just as bad as they used to be.

The question was before the executive of the Dominion Millers' Association a few weeks ago, when a letter was read from the Secretary, of the Millers' Tracing Bureau, of the United States. This bureau was organized during July, 1891. Its first month's accounts were not closed until August 31, therefore the end of January, 1892, would constitute its first six months' existence. During that time 882,823 sacks of export flour had been traced for members, the average number per month showing a gradual increase, and at present amounting to about 250,000. The bureau during this time had proven rather more than self-supporting.

It was stated in the letter from Secretary Barry that the average time for shipments from the date of leaving the mill until the flour left the sea-board was now from seventeen to twenty days, which was an undoubted improvement on the old order of affairs. The American officer intimated that the National Association would be glad to make any practicable arrangements with the Canadian Association that would be instrumental in adapting the methods of the bureau to the shipment of flour from Canadian ports. This plan has been advocated by the MILLER in previous issues, and from the courteous and fraternal tone of Mr. Barry's letter, it does not seem unlikely that a satisfactory and useful scheme may be worked out. As every miller knows, the matter is of sufficient importance to make it worth a vigorous effort by Canadian millers.

CANADIAN V. AMERICAN MILLERS.

The following letter signed "Hayne," Brigden, Ont., is from the well-known miller of that town. All millers may not agree with Mr. Hayne in his statement of the difficulties that he believes handicap Canadian milling interests, but it will be admitted that from his side of the discussion he makes some strong points. We should be glad to hear from other millers on the question, and in the multitude of counsel, we are told, will be found a proportion, little or big, of wisdom. Trade interests at any time are more likely to suffer from indifference than too free a discussion of its affairs by its own members :

SIR,—In these days of protection and free trade talk it is well to consider the position of Canadian millers and that of our American competitors in the markets of Britain. Under the present protection arrangement we have undoubtedly an advantage in the provincial markets, and the advantage would be much more marked if our manufacturing capacity were not double or treble the home demand. As it is now, the exporter of wheat has an advantage over the miller, and is consequently nearly always able to pay more, relatively, for wheat than the manufactured article will bring, and while the present, or any surplus of crop prevails, such will be the case. To illustrate Our market, or at least our controlling market, for mill offal, bran and shorts, is the Eastern or Middle States, and to put our feeds into that market means about $2.50 per ton between actual duty and entry charges. Well, how does this work? Take, for instance, a mill of 200 barrel capacity; for argument's sake we will say it uses 1,000 bushels wheat per diem. The offal on this wheat will be about eighteen pounds to the bushel, or nine tons per day; nine tons at $2.50 means $22.50, and for the export trade about two cents per 100 pounds on the flour manufactured for duty on the cotton sacks in which it is shipped, which will equal about $8 more in all. If the American miller were buying wheat the same as the Canadian, and selling flour in the same market, an American would be able to realize about $30 per day more than the Canadian for running his mill, and many of us would be glad to make the half of that amount in the trade. Now, $30 per 1,000 bushels is three cents per bushel, and in order to compete in the world's markets the Canadian miller must buy his wheat from the farmer for three cents per bushel less than the American, in similar position as to freights. But the Canadian shipper of wheat for export is in exactly the same position as the American shipper; consequently in his export business, whether to Jamaica or Jerusalem, and our present trade position as to milling against the world, with perhaps one of the best locations in America, the largest Canadian manufacturing industry is, for all purposes of profit, handicapped out of the race. Scarcely anyone will be found to say that the millers of Canada are deficient in energy or pluck, but there seems very little use in our sending a representative to Europe, or the Government the best-looking man in Canada to Jamaica, until they make an effort to relieve this important trade from the disabilities under which it labors. As well try to rear an ice bridge across the falls of Niagara in the month of July. Brother millers, especially you who are near the throne, speak out.

BRIGDEN, Ont., March 9, 1892. HAYNE.

TRANSPORTATION TOPICS.

A deputation from the Canadian Marine Association has interviewed the Government, pressing upon them the necessity of refusing to rescind the order in council passed last year prohibiting American vessels carrying grain to Montreal from transhipping at Ogdensburg instead of at Kingston. An effort is being made in certain quarters to have this order rescinded, but the delegates, after their interview, were not very hopeful that their protest will be heeded. The delegates also urged the advisability of at once deepening the St. Lawrence canals to a uniform depth with the Welland.

The success of the whaleback steamer in making the voyage from Duluth to Liverpool has excited remarkable attention in ship-building circles. Experts and capitalists in St. Louis talk of a plan which may result in the shipment of grain from that city directly to Europe. It is believed that vessels of the whaleback class can get to

Europe by way of the Mississippi river and the Gulf of Mexico. An order has been given for the construction of one such vessel.

Owners of Canadian boats, not without just cause, complain of the large quantities of grain that are being carried over American water-ways. Already much has been deviated from the St. Lawrence route, and not a little Manitoba grain has been chartered for the opening of navigation from Port Arthur via Buffalo and New York. Last year between two and three million bushels of Canadian grain were exported via Buffalo, and it is said that American forwarders are underbiding the Canadians in the competition for the business again this season. Vessel owners are now asking 3s. 9d. per quarter from this port at open water to London and Glasgow and 4s. to Bristol, and it is said that freight room can be obtained at New York and Boston at 2s. 4d. to 2s. 6d. to London and Glasgow, and 1s. 6d. to 1s. 9d. to Liverpool.

OATMEAL CONSUMPTION.

Americans are disposed to dispute the claim of the natives of Scotland, as the greatest consumers of oatmeal in the world. There were consumed in the United States in 1888, 475,000 barrels; this year there will be a demand for about 850,000, and some estimates place it as high as 1,000,000. A St. Louis miller is authority for the statement that : "Oatmeal is eaten everywhere now, and by everybody. In many families it is the principal dish for breakfast. I know one bright and healthy young man who has eaten nothing at his morning meal for years except oatmeal. It is largely used to allay thirst. Engineers, firemen and others who have to work in heated rooms find that by mixing a little oatmeal with their water they can slacken their thirst with a small quantity of liquid."

THE FLOUR MARKET.

It is not possible to report anything but a dull market for the past month. The output of the Minneapolis mills has shown a steady decrease for some weeks. The extreme dullness has had the effect of causing three large mills in that city, representing about 5,000 bbls. daily, to close down, and before the month is out others will likely stop running.

Foreign trade is very dull. The Mark Lane Express of 14th says : "American flour was pressed for sale at 26s. California flour was quoted at 31s." The Bulletin of the Dominion Millers' Association of 15th inst. says of export flour: "Some sales of 85% patents 27s. 6d., Liverpool; and 80% patents, at equal to $4.40, f.o.b. in wood."

Home markets are quiet. Toronto ; Slightly firmer. Straight roller flour is nominal at $4 to $4.10, and extra at $3.90. Ontario patents at $4.70 to $4.90. Millers' Bulletin says of Ontario flour, bran, etc.: "Large sales of 90%, patents at $4.25 to $4.30, and 85% patents at $4.40, f. o. b. for Lower Provinces. Shorts, $12.50 to $14, and bran, $12.50 to $14.50. Good enquiry for bran from States."

Montreal : Sales limited to local dealers. Patent spring, $5 to $5.20; patent winter, $5 to $5.10; straight roller, $4.50 to $4.65 ; extra, $4.15 to $4.30 ; superfine, $3.90 to $4.05 ; fine, $3.30 to $3.65 ; strong bakers', $4.60 to $5.

Winnipeg, Man.: Jobbing prices to the local trade in broken lots are as follows per 100 pounds : Patents, $2.40 ; strong bakers', $2.20 ; second, do. $1.70 to $2 ; XXXX, $1.20 to $1.40 ; superfine, $1.10 to $1.15. Less than 100 pound sacks 5c. extra per hundred. These prices are for well known brands. Some brands selling under quotations. Millstuff : Prices are irregular, and there is a wide range of quotations. Bran has been quoted at $9.50, and even $9 per ton, in ten ton lots, while up to $10 and $11 is quoted for smaller lots, to the local trade, with shorts held $2 per ton higher. The lower quotations on bran would indicate the value at country mills, in car lots, at $6 to $6.50 per ton. Meals: Jobbers are selling mostly at $2.50 for rolled oats and granulated meal, and $2.40 for standard per sack. Some brands of standard are quoted at $2.30, and granulated at $2.40. Oil cake, in bags, $20 per ton ; oil cake meal, $23 per ton, these prices for five ton lots ; cornmeal is held at $1.95 to $2 per 100 pounds. Split peas, $2.50 to $2.60 per 100 lbs. Beans, $1.75 to $2 per bushel. Pot barley, $2.65 per 100.

Office of the CANADIAN MILLER,
March 15, 1892.

THE GENERAL SURVEY.

THE term "unsettledness" was used in describing the conditions of the markets a month ago. We can hardly say that conditions are any more settled at the present writing; if disposed to play on the word we would say that the disposition in prices is to become decidedly settled—downwards. On the 11th inst., the lowest prices of the season were recorded on 'Change, and the market has since been completely demoralized. The Chicago market closed at present writing with prices nearly five cents lower than for the previous week. The March report of the United States Government, showing stocks of wheat in farmers' hands of 171,000,000 bushels, has had much to do with this sudden weakening of the market. A year ago the stocks were 112,000,000 bushels, two years ago 156,000,000, and in 1885 the aggregate was 169,000,000. When we take into consideration the immense export of the year, which is placed at 205,000,000 bushels, the seriousness of the situation will be apparent to even a casual observer of market conditions. There can hardly be any doubt that the estimated crop yield of 612,000,000 is not over generous and that the developments of the future may show the figures for the season to have been in excess of this estimate. The fact is patent to everyone that the market is overloaded at all points, and where any increase of price is to come from, to help out the individual grain man who is overstocked, is a conundrum that goes begging a solution these days.

Under these conditions enquiry as to the growing crop is fraught with more than usual interest. Advices from Europe tell of milder weather in such important grain-raising countries as Germany, France, England and Hungary. The colder weather that had prevailed is reported to have done less or more injury to the winter grain. Roumanian prospects were called favorable according to latest advices. The south of Russia seems to be menaced, excepting in the Caucassus, and the later cables from France show some alarm for the outcome in portions of that country, although reports continue favorable in most parts. The soft weather permitted progress in England with good prospects. Frost, it is said, did slight injury in Germany, but the prospect on the whole was favorable. India does not promise the large exports obtained from the preceding crop owing to an insufficient rainfall in some important districts, and the later reports from Argentine are not so glowing as the earlier as to the amount that will probably be available for export, the later estimates cutting it down from 600,000 tons to 450,000 tons. The Australasian surplus of wheat is thought by good authorities now to be decidedly less than last year. The outlook in Asia Minor was called good, but there were fears of late frost that might prove disagreeable. In the leading States of the American Union the outlook is not better than fair. Kansas has had much fine weather lately and in view of the thin stand and weak shows fair improvement, but the freezing and thawing there, as in Missouri, did no good, and perhaps considerable harm. At least seventy-five per cent. of the later reports from Kansas show a condition fair or above. The conditions in Missouri are probably much the same as in Kansas, although it is generally spoken of as less promising. East of the Mississippi River there are spots where the fields do not look well, but in most places it is evident there has been little of any suffering since winter set in. "The full judgment," says the Market Record, "cannot be formed until the plant has had longer time to shape itself for spring advancement. Even further north, including Michigan, Nebraska and Wisconsin, where winter wheat is grown in the latter States, the prospect is thought to be good as well as in Minnesota, where there is some winter grain grown in the timber. There is a more indifferent outlook now than last year, due to poor growth in the fall." Another report says: "Illinois has about seventy-five per cent. more than last year; Indiana twenty per cent. less; Iowa about the same; Kansas about the same, and Kentucky about a half crop. Michigan will have about the same crop. Missouri reports indicate the same. Nebraska's will be twenty per cent. below last year's. New York and New Jersey's prospects were never better. Ohio reports vary widely but the average crop is assured. Pennsylvania reports a slight falling off. Tennessee will not do so well as last year. Texas has the prospect of a good crop. Washington and Wisconsin both report a good condition. Virginia will make an average crop." In our own country, so far as reports have been received from leading grain centres, there are no discouraging features that have shown themselves.

WHEAT.

Quotations at this date are as follows: Liverpool—Spring wheat, 7s. 10d. to 7s. 10½d.; red winter, 7s. 9d. to 7s. 9½d.; No. 1 Cal., 7s. 10½d. to 7s. 11½d.; No. 1 California, 7s. 7d. for May. American: Chicago—March, 83c., May, 84c. Oswego—White state, $1.00; red state, $1.01. Duluth—No. 1 hard, 81⅛c. for March, 85⅛c. for May; No. 1 Northern, 79⅜c. for March, 83c. for May. St. Louis—89c., March; 88⅜c., May; 84c., July; 83c., August. Canada: Ontario—White and red, 84c.: No. 1 white, 96c.; No. 2 white, 92c. Manitoba—No. 1 hard, $1.03½ this month; $1.04, April; No. 2 hard, 97½c. Millers' Bulletin quotes: "No 1 hard, $1.04; No. 2 hard, 98-99c.; No. 3 hard, 90-91c.; No. 1 regular, 78c.; and No. 2 regular, 69-70c., delivered from North Bay. Also some grinding transit; No. 1 hard, $1.05; No. 2 hard, $1.00; No. 3 hard, 91c.; No. 2 regular, 70c.; No. 3 regular, 60c."

BARLEY.

Farmers and grain men are divided in their opinion on the merits of two-rowed as contrasted with six-rowed barley, and an animated discussion is kept up in the newspaper press. The agitation at Washington for a reduction of the duty on barley continues, but with what result is not yet known.

The market is altogether lifeless; sales almost nil. Local prices are nominal. No. 3 extra is hardly worth 43c. at outside points. A despatch from Buffalo says: Barley—a sale of a round lot of something over 25,000 bushels was reported made at 60c. quality not quite up to No. 2 Milwaukee, and five cars fair Michigan at 57c. Quoted: Fancy western, 64c. to 65c.; No. 2, 62c.; sample, 48c. to 55c.; Michigan, fair to choice, 58c. to 62c. At Albany and Oswego no trading reported. At New York the market quiet; No. 2 Milwaukee, 68c. to 69c. St. Louis—Nothing doing. Chicago—Barley, No. 2, at 56c.

OATS.

Some little business is doing and prices have changed little during the month. Sales have been made at 33c. in track, and outside 29c. and 30c. was asked.

PEAS.

Rather firmer prices prevailing than a month ago. Offers o 60c. have been made north and west, but exporters are not disposed to give more than 58c. or 59c.

RYE.

There is really no rye market; at least, no one knows where to find any profit in it. Seventy-five cents has been quoted as a nominal value.

PERSONAL.

John Campbell, of Southwold, Ont., who had carried on a threshing business for forty years in that township, is dead, aged 71.

William Galbraith, the efficient and popular treasurer of the Dominion Millers' Association, has been elected chairman of the Board of Arbitration of the Toronto Board of Trade.

A. E. Hitchcock, a miller of Leicester, Eng., is in this country visiting Winnipeg and other points in the Northwest, and arranging for a better shipment of wheat to his mills.

The MILLER was pleased to receive a call from A. T. Sitterly, of Schenectady, N.Y., representative for S. Howes, of Silver Creek, N.Y., the extensive manufacturer of grain-cleaning machinery.

Mr. Lincoln Goldie, of Guelph, Ont., has acquired the certificate of his brother, the late Thomas Goldie, securing for him membership in the Toronto Board of Trade. He received a cordial reception when introduced on 'Change.

Mr. C. S. Rider, the capable and popular manager of the North American Mill Building Co., of Stratford, Ont., called on the MILLER when in the city a few days ago. A little bird has whispered to us that orders with Mr. Rider's company are crowding in at so rapid a rate that the works are to be run fifteen hours a day.

THE Province of Quebec Lottery holds an anomalous position with the lawmakers of our country, being legalized by the Government of Quebec and possessing its complete protection. Recent attempts made to secure the control of the funds of the concern have altogether failed, and an action brought against the institution in the courts of Quebec has been dismissed with costs. Drawings are held twice a month and extensive prizes are awarded. Secure in the legal rights awarded them by the Government of the province the management do not hesitate to give every guarantee of assured drawings and prompt and immediate payment to all winning ticket holders.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice sbows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 12th of each month to insure insertion in the following issue.

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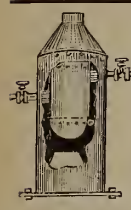

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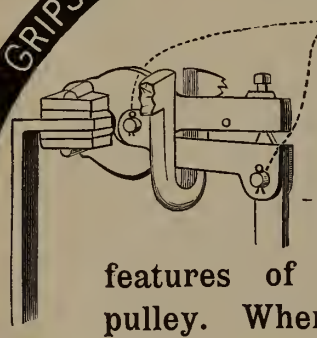

SEE THOSE pins

they are one of the features of the Waterous grip pulley. When in position the grips always stay there; when necessary to detach grips, press out split keys, pull out steel pins when grips drop out. This can always be done without stopping the shaft.

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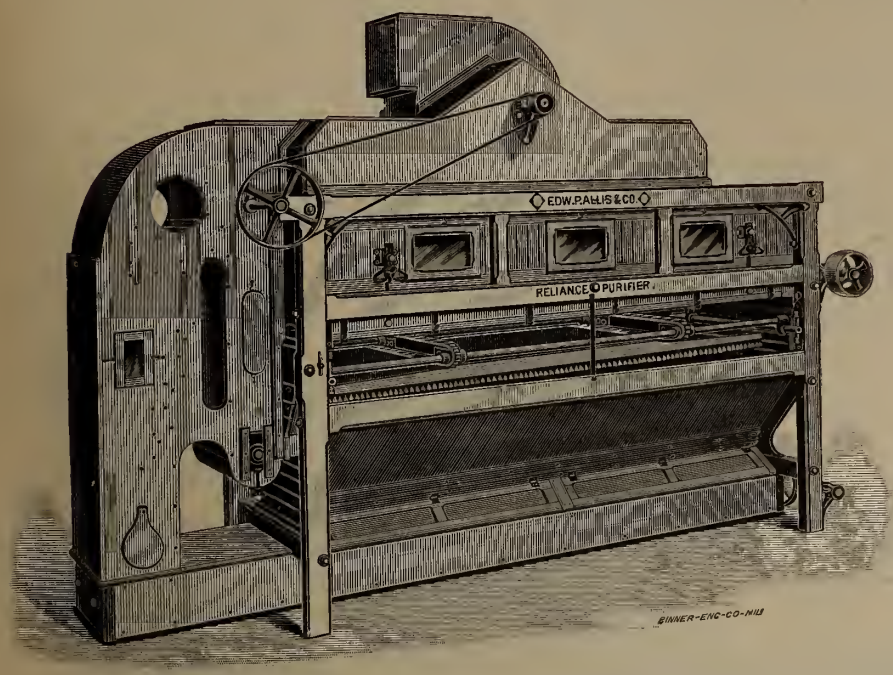

Reliance Middlings Purifier, with Tail Aspirator Attached

The Combined Reliance Air and Sieve PURIFIER WITH Dust Collector

THE middlings purifier illustrated in Cut No. 1 is of the Reliance patent, in a handsomely finished chest, with double conveyors of the hollow shaft Reliance patent, having reversible flights. The reciprocating sieve is operated by smooth working eccentrics and covered with Dufour bolting cloth or gritz gauze, and the cloth is kept clean by an automatically traveling brush, moving crossways of the sieve so as to avoid mixing the clean stock at the head of the sieve with the inferior middlings at the tail. An excellent cloth tightener is provided, and the air currents are controlable at will.

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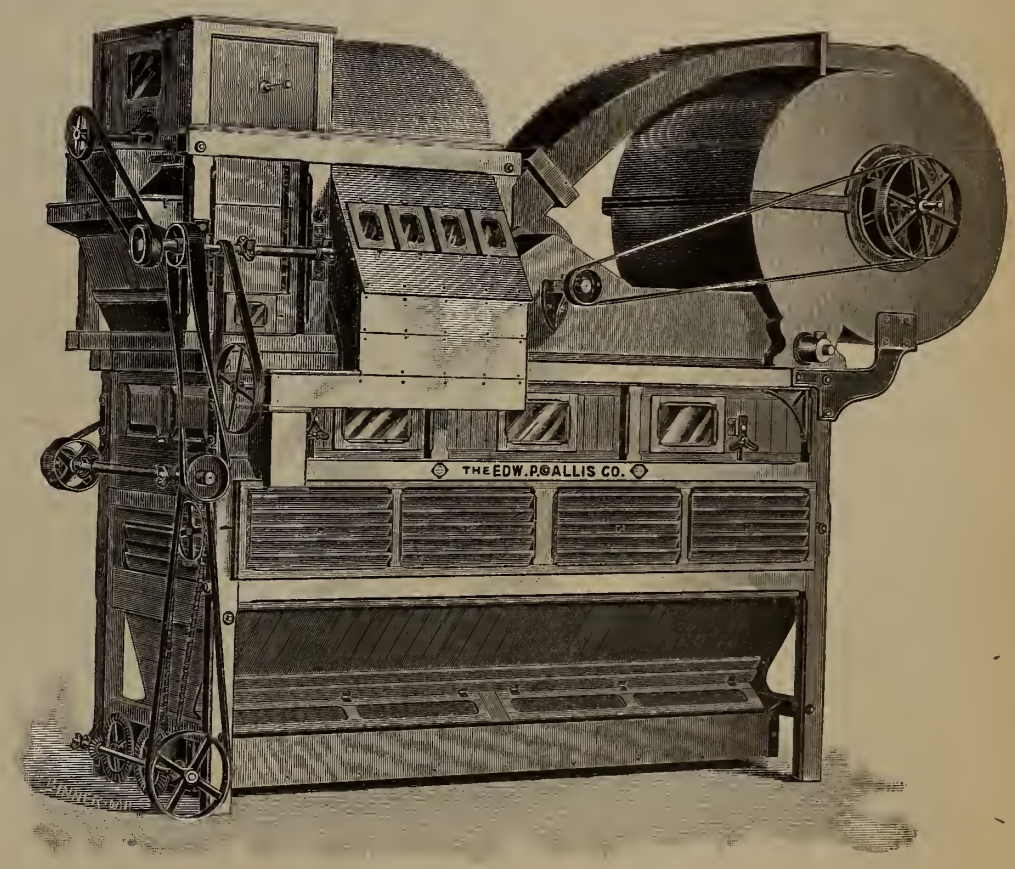

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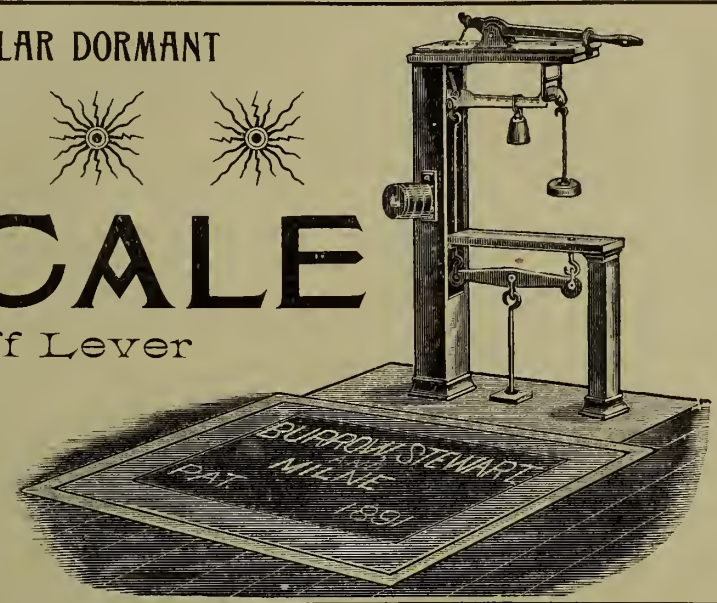
With . or . without Drop . Lever



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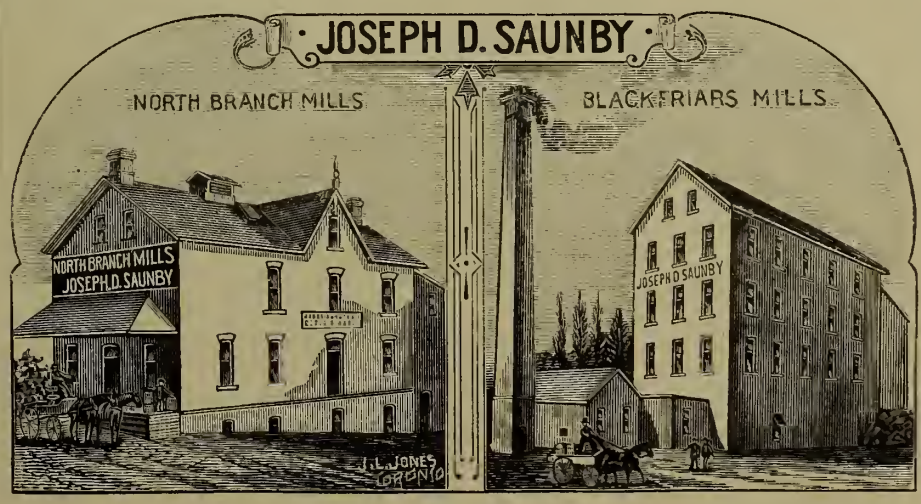

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OLD SERIES, VOL. X. } NUMBER 4.
NEW SERIES, VOL. II. }

TORONTO, ONT., APRIL, 1892

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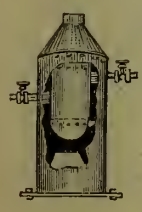

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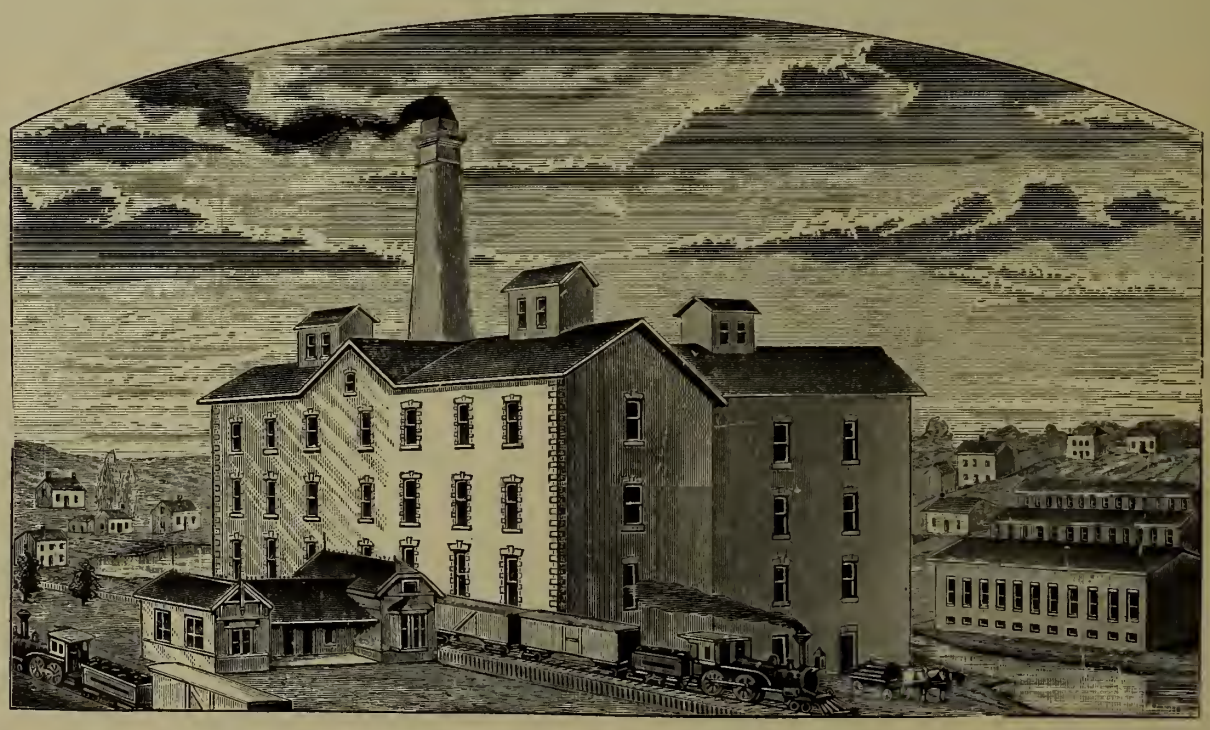

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THE CANADIAN MILLER

Old Series, Vol. X. } Number 4. TORONTO, ONT., APRIL, 1892 { Terms, $1,00 Per Year
New Series, Vol. II. } { Single Copies, 10 Cents

CHARACTER SKETCH.

MR. J. D. SAUNBY.

"Blest work! if ever thou wert curse of God,
What must His blessing be?"

A MODEST man is Mr. J. D. Saunby, of London, Ont. One might be a delegate to millers' conventions for a decade of years, or, for that matter, of any organization with which he is identified, and so far as knowing Mr. Saunby for his much speaking, he would not be known at all. The Dominion Millers' Association has members who could hold the floor for an hour where Mr. Saunby would be satisfied with ten minutes. He is a silent member as far as words are concerned, but in the councils of the Millers' Association his opinion is one that makes opinion and ever wisely influences milling legislation. "There is little to see," some one has said, "and little to do, 'tis only to do it," and this, we would suppose, is a guiding principle with Mr. Saunby in all his conduct and acts, public and private. He believes in the qualities of doing.

Mr. J. D. Saunby is of English parentage, his father and mother hailing from the county of Lincolnshire. He himself was born at Lachine Rapids, Que., in 1837. His father ran a flour mill at Laprairie and Caughnawaga for a number of years, so that of the younger Saunby it can be said, as of the Goldies and others prominent today in milling ranks in Canada, he was to the manner born. When nine years of age Mr. Saunby's father removed to the upper province, settling in Omemee, in Victoria county, where he conducted a flour mill until 1854, when the family again changed their place of abode, coming further westward to the city of London, where Mr. Saunby has remained a resident from that day to the present. From 1854 to 1860 the senior Saunby ran a mill at St. John, seven miles from London.

In 1860 Mr. J. D. Saunby entered into business on his own account with his brother-in-law, Mr. Hilliard, the co-partnership existing until 1872, when Mr. Saunby bought out his partner's interest in the firm. At that time the North Branch Mills on the river Thames were being operated. Five years later Mr. Saunby purchased the Blackfriars Mills on the opposite side of the river. In 1881 the latter mill was changed to a roller process mill of the most modern class; the North Branch Mills continued to be operated as a stone mill. The capacity of the roller process mill is 300 barrels per day, which is sometimes extended to 325 barrels. Both mills are possesed of steam and water power.

It is not necessary to suggest that Mr. Saunby's extended experience in milling, reaching back practically from childhood, reflects itself in the high character of the various grades of flour manufactured at his two mills. Their reputation is in no sense local, a large business for years being carried on in the Maritime provinces, and especially in Nova Scotia and Prince Edward Island. To Glasgow and Liverpool considerable quantities of the Saunby flours are shipped, not less than 20,000 sacks being exported this season.

An American Archbishop used to say: "The human heart is like a millstone; if you put wheat under it, it grinds the wheat into flour; if you put no wheat, it grinds on, but then 'tis itself it wears away." The healthy man must be active; he must labor; the remark is true in all human experience that more men rust out than wear out. Charles Lamb, after having spent a lifetime in the wearisome drudgery of the India Office, and had well earned his retirement, gave it as his experience that "no work is worse than overwork." Mr. Saunby is one of the men who finds his enjoyment in constant and thorough-going work. He has had the satisfaction during these years of pleasurable toil to enjoy a reasonable share of its successes; for it can be said, with the history of the business standing as its own monument, that his is one of the successful milling properties of this country.

The labors of the day closed, Mr. Saunby finds complete enjoyment in the bosom of his family. We feel safe in saying that if Prof. Fowler were to have an opportunity of making a phrenological diagnosis of Mr. Saunby's head he would mark the domestic faculties large, with a cross opposite these to give extra emphasis to this phase of the delineation. His family had consisted of three children, one daughter and two sons, but of these only one son remains, 26 years of age, who is actively associated with his father in the milling business.

Mr. Saunby is one of London's most respected citizens; a prominent member of the Methodist Church, serving as regular steward for a number of years; an active member of the Board of Trade of the Forest City; in politics a Liberal; and always ready to assume his full share of the responsibilities of citizenship, and, having done so, to do the work undertaken.

He was for three years reeve of London West, and

Mr. J. D. Saunby.

much of the prosperity of this section of the municipality is due to the capable business management of Mr. Saunby while holding that important position.

ROLLER MILL DRIVES.

IT is curious how certain types of milling machinery seem to keep their distinctive character in different countries. To the expert miller or milling engineer these differences are very apparent, and in no case is this more apparent than in roller mill drives.

It would seem as though by tacit consent that roller mills in America are for the most part belt driven, while in the United Kingdom gear driving is the rule. The battle that once raged over the rival systems has now in a great measure died away, with the result indicated above. Both systems have their merits, both their defects. In the case of belt drive its merits are the obvious ones of silence in working, and more ready adjustment without disturbing the force of the drive. Its defects, on the other hand, are liability to slip (and, therefore, irregularity of differential speed), and greater frictional power consumed for a given work. Gear drives, on the other hand, are positive in their action, and consume less frictional power to work them. They are, however liable to noise unless well pitched, and even then are affected by the relative adjustment between the rolls. In this country, however, the advantages of gear-driven rolls seem to have been demonstrated to the satisfaction of millers and milling engineers, who therefore adopt them for the most part in their usual practice.

Amid the variety of methods for driving roller mills there are three that we cannot call to mind as ever having seen or heard of, viz., (1) friction drive, (2) rope drive. The first is obviously unsuitable, but as regards the second there is no reason why, under certain conditions, a rope drive might not be useful. The "grip" of a rope on a grooved pulley, where the groove is not rounded, makes it more certain than any belt drive, while partaking of its advantages as well as that of the gear drive. With a swinging level pulley above or below to tighten or slacken the rope the pressure could always be regulated to a nicety without the tension so often needed with the belt, the V. groove rendering this unnecessary.

Rope driving direct from the engine to the various shafts of a mill is now a common feature in many new mills, so that its extension to the detail (if it may be so called) of inside drives does not seem an impossible development in future.

With regard to gear driving, it might be possible to insure an always positive relation between geared wheels (whatever the distance between the rolls), by the use of the now obsolete and well-nigh forgotten "sun and planet motion," which was so favorite a device in the early days of engineering.

This would, however, be too cumbrous, and involve too much power ever to be adopted in roller milling.

WORKING WITH BUHRS.

THOSE who are yet trying to make a marketable flour with buhrs, says a writer in the Mechanical News, and there are still many of them, do it with buhrs that would formerly have been considered scarcely in good enough condition to make feed. If it was then of such great importance to have the buhrs in the best condition, it is certainly more so now; because it was then a race with buhrs, while now it is buhrs against a superior method of milling. The faces of buhrs for making flour should be close and dressed as true as is possible. They should also be smooth, or very lightly touched and finely cut. The furrows should be wide, comparatively shallow, and dressed as smoothly and as straight as the face, and drawn out to a fine feather edge. For the best milling there should be no more face than furrow; in fact, for grinding hard wheat there should be rather more furrow than face. The motion should be slow and the grinding not forced, then with the runners in good balance, and with other necessary machinery for clearing and separating, both before and after grinding, the buhr mill can hope to still make a fairly respectable flour.

FAREWELL TO THE MILLSTONE.

FAREWELL to the millstone, its course it has run,
Like a time-worn old servant, its work is nigh done;
No longer the stoneman with sharp bill shall trace
Those parallel lines on its ruddy old face,
No longer the furrows with care shall mark out,
Nor handle the meal rushing down thro' its spout.

From the earliest ages that record can trace,
For grinding the grain the millstone held first place;
From the time of the Briton, whose slaves worked the quern,
To the modern mill company's mammoth concern.
Tho' now it is banished for rollers of steel,
Fond regard for the millstone we ever shall feel.

Our old friend's supplanted by rollers, but yet
For things that must be it is vain regret.
Of this new milling system let's study the plan,
And its ways and its secrets find out if we can;
Till our flour, as of yore, ever be in demand,
And the bakers still cry for the strong and white brand.

BRITISH "CONDITIONING" METHODS.

BY G. M. PARKINSON, DONCASTER, ENG.

I WILL try to tell you how, at a small inland country mill, situated in a purely agricultural district, the wheats of Europe, Asia, Africa and America meet, and are cleaned, and blended, and conditioned and acclimatized till the golden grain of California need count it no dishonor to meet death side by side with the darkest-skinned, and once despised, product of our Indian empire; and the sweet, plump berry of old England need fear no contamination of its virtues from contact with the ill-reputed wheat from the land of the Pharoahs, as they lie side by side awaiting a common doom. It is scarcely necessary to refer to the fact that the first operation is performed on a warehouse separator, which removes the larger rubbish, such as sticks, straws, big clots, etc. And now man calls in water to his aid, and of all the means and processes employed to clean wheat there is not one so sensible, so natural, so effective and so cheap as that of washing. It is sensible and natural, because it is precisely the course that common-sense points out to any man as the proper way to clean almost anything and everything. We shall clean our hands before we dine to-day. Shall we get a dry brush and scrub them? If so, I am afraid dinner will spoil before we shall be presentable at the table. No, we shall immerse them in water, and with a little friction the thing is done. Just so with wheat; a plunge into pure cold water and the dirt begins to capitulate at once, and when the wheat arrives in the sack there is as much improvement in its appearance as in that of a captured street Arab after a bath. And when I am told that there are mills using foreign wheats which to-day have no washers in them, I simply say, "I cannot believe it."

It is quite unnecessary to describe a washer; suffice it to say that there need not be the slightest difficulty in choosing a good one. I might almost say there would be more difficulty in finding a bad one. Mind, I say a washer; one that removes all the loose, and the comparatively loose, dirt, and of course the stones; not merely a damper for this, though doubtless at times a useful little machine, has no place in the system I am advocating to-day; but, whatever machine is adopted, remember this, that an abundant supply of pure fresh water is absolutely necessary for success. The process of washing is completed and discrimination and skill begin to play a foremost part. The softer and more delicate kinds of wheat, such as Californian, soft Chilian, American and Russian should at once proceed to the heater, but the coarser and flintier descriptions, such as Indians, Egyptians, Syrian and hard Chilians, are improved by a few hours interval to permit the water to penetrate into the interior; in the former kinds this is sufficiently well done in the continuous process. The object of the heater is not to dry the wheat, but to drive the moisture of the berry, whether it be natural to it as in the case of English, or artificially introduced as one of the results of the washing process, from the centre to the outside, thereby loosening not only any remaining dirt that the first washing may have failed to remove, but also the fine outer skin of the berry itself; in this condition hot, moist, in fact, perspiring profusely, it is introduced to the scourer, where anything from simply removing the dirt to almost skinning the wheat can be performed; it is then passed through a powerful exhaust, to clear it of the offal the scourer has detached, to the cooler, the real drier of the process, which is a most effective purifier, also where every trace of sweat or moisture is removed. All the loose particles of offal which may still be found adhering to the wheat berry are here effectually detached by the peculiar motion of the grain as it descends its zigzag course and effectually removed, and the wheat, as far as its condition is concerned, leaves this machine absolutely ready for the first break-roll; it is also equally ready for storage in silos till wanted. For our own part we recommend, and, as far as possible, practice, the continuous process, that is, to mill the wheat as it leaves the cooler, with as little interval as possible, for it undoubtedly is a fact that the wheat is never again in such perfectly mild and kind temper and condition as it is at this stage, breaking freely, yielding clean, broad bran, and consequently allowing only a minimum quantity of offal to get through the rotary scalpers and into the general system.

Having briefly described the process, let us have a look at the machines engaged in it. Now we will descend from the didactic to the descriptive, and begin with the heater, a machine which, though of very early origin in the wheat conditioning epoch, of entirely home design and home manufacture, is still doing work today which we in our own experience have never seen surpassed. What is our principle? Simply that of the Turkish bath. Our heater consists of a series of steam-jacketed inclined plates or trays, arranged over one another in zigzag form, and suspended between hollow columns which serve both as supports to the plates and conduits for the steam. Each plate is furnished on its upper side with adjustable strickling bars or louvres for regulating the thickness of the stream of grain. A hopper is placed at the top of the machine, into which the grain, after being washed, is fed, and thence travels at a pace regulated to the greatest nicety by a valve at the outlet, and in a thin sheet of from three quarters of an inch to an inch-and-a-half in thickness, down the upper surface of the plates, and under the strickling bars or louvres, being turned completely over in its passage from plate to plate, being precisely the action of the old-fashioned kiln, excepting that in this case the manual labor required to turn the grain over is supplanted by automatic means. Discharged from this machine, the wheat is then handed over to the care of the scourer, but before describing the operation and effect of this most useful and essential machine, which for our purpose requires to be in some respects of special design and construction, let us see what has happened to the wheat in the heater. We have likened our process to that of a Turkish bath. Are we adhering to the conditions of this humanly healthy and physically invigorating process? Let us see. The wheat has been well saturated in the washer, and the loose and extraneous dirt dispersed and dissipated, and what is supposed to be the comparatively clean berry introduced to the series of hot rooms represented by the zigzag heater. Each plate of this forms a hot room, and as the wheat is introduced to each room successively, it perspires more and more freely and when it reaches the outlet is not only hot and moist and clammy, but has an amount of dirt upon its skin, which, if not removed, would make a clear, bright flour from patent to low-grade absolutely impossible, and that this desideratum is attained we can prove to the stoutest skeptic that ever handled a spatula.

Let us return to the wheat, for to keep it waiting in its present prime condition would be to lose the golden opportunity of the whole process. We have got to the end of the hot-room stage, and the patient is waiting for the vigorous attentions of the attendant rubber, and in the meantime is jealously guarded from draughts or breath of air, which, whether hot or cold, would tend to dry the skin and close the pores, and make the value of the attendant's services comparatively nil. We do not mind the upper surfaces of the heater trays being open and exposed to the surrounding air, so that some of the vapor may of itself rise and disperse, and perhaps a slight suction here might simply carry this vapor away without militating against the good effects, but we strongly object to any means for drawing the heat through the grain; the heat must rise of itself and find its own way through, as in the old kilns, to produce the necessary sweat. Now for the rubber. Well, that is our scourer, and with a patient in such prime condition the work is easy, and the results to any but an actual eye-witness almost beyond belief. The wheat comes out of this machine still warm, but beautifully bright and clean and healthy, the separated dirt and fluff, the outer skin having gone directly from the scourer to a conveyor, which takes it into the mill to be automatically mixed with the bran or pollard most suitable for its company and complexion. The wheat must now be finally dried and purified, and the gentle action of the cooler effects this purpose and attains this end. The general construction of this machine is similar to that of the heater, but the plates or trays, instead of being hollow and filled with steam, are perforated, and a powerful fan draws a gentle but abundant current of air through these perforated plates, and through the thin stream of wheat which is gently travelling down them. The wheat here, as in the previous machine, is turned completely over as it passes from plate to plate, and its upper side is free and unimpeded, and open to the fan, so that any of the particles of the dirt or skin, loosened by the preceding treatment, which may still be found adhering to the berry must inevitably now, by the regular and complete turn over of the stream of wheat, be brought into a position favorable for the fan to act upon them and carry them away. This machine, then, is not only a cooler and a drier, but, and mark this as one of its best qualifications, it is a purifier also.

Having now briefly described the principles of our system and the practical means by which we carry out those principles, let us consider some of the advantages to be gained by their adoption. First and foremost, a practically unlimited choice of the wheats of the world. Hard wheats can be made mellow, flints turned into flour, soft wheats can have their superabundant moisture eliminated and be brought to any degree of dryness, and all wheats, hard, medium or soft, can, so long as they are inherently sound, be rendered absolutely clean and fresh and pure. Further, by this preparatory process the work inside the mill can be simplified throughout by reason of the fact that the most baffling offal a miller has to deal with, the fluff and beeswing scraped off the branny side of the wheat berry by the break-rolls, does not get into the system at all. The power required is reduced, the resulting products incalculably improved, the flour being stronger, brighter and purer, and the offals are offals indeed. Then again, this process enables the miller to attain to what, doubtless, as a miller, is the height of his ambition, the reputation for reliability and regularity in the quality of his flour. He needs no longer be the victim of such circumstances as the varying supplies of an erratic market or the constant changes of our uncertain climate. Does Russia prohibit, then America fills the gap. Does America fall short, then India comes to the front. Is India famine-stricken, then from some unexpected quarter of the globe supplies pour in. All the miller need want is wheat, sound wheat, and given conditions and means, such in principle, but not necessarily in detail, as we have described, and be the weather wet or dry, warm or cold, his wheat from eastern hemisphere or west, the resulting flour should be such as would produce a loaf as fine in flavor as the fastidious palate of the workingman can demand, and there is not a more fastidious critic, or a finer judge of the quality of the staff of life than the toiling millions with whom bread is the staple food, and the flour should always yield as many of such sweet, nutritious loaves as the most anxious baker, whose laudable ambition is to pay his way, and make a provision for his old age besides, has any unquestionable right to expect. Further still, this system insures an enormous saving of power, and who does not desire this?

HANDY TO HAVE AROUND.

DID it ever occur to our miller friends, says The Millstone, what a handy little tool a muffled mallet is? Every miller should be the owner of one, and it should be his constant companion when making the rounds of the mill, and with it give every chop or meal-spout a tap on the under side as he passes it. It will make no noise, nor will it in any way injure the spout, but what a lot of trouble and loss of time it may save! Spouts so frequently reminded of this duty in that gentle but somewhat forcible way, are not very apt to choke; in fact, never, unless suddenly overcrowded. If the millers will provide themselves with such mallets, and diligently use them a while, it will soon become a habit which will cling to them and make them feel lonesome without their companion, should they happen to forget it.

A NEW FLOUR PROCESS.

A GERMAN scientist has patented a process whereby a flour containing 90 per cent. albumen is produced from wheat. It is claimed that is easily digested, and can be kept any length of time without spoiling; that it is as nourishing as dried white of egg, and will take the place of the albumen now obtained from meat and eggs, and can be supplied at less cost. If the civilized people of the world will now depend upon ordinary bread for starch, whole-meal bread for phosphates, and the new patented process for their albumen, three constituents necessary as human food, can be supplied by millers, to which they will not object.

DOMINION MILLERS' CONVENTION.

A SPECIAL general meeting of the Dominion Millers' Association was held in the Board of Trade building, Toronto, Wednesday, March 30. The chair was occupied by President Edward Peplow, who called the meeting to order at 2 p.m. On the right and left, respectively, of the president were C. B. Watts, secretary, and William Galbraith, treasurer. A large representation of members was present from different parts of the country; among these were: F. L. Green, Greenwood; E. S. Edmonson, Oshawa; H. B. Schmidt, Thornhill; A. Wolverton, Wolverton; D. G. Goldie, Ayr; J. H. Dracot, Streetsville; John Brown, Toronto; Charles A. Smart, Montreal; K. Thompson, Lynden; G. S. Baldwin, Aurora; S. R. Stuart, Mitchell; P. R. Hoover, Green River; R. C. Scott, Highgate; James Mills, Plattsville; J. L. Spink, Toronto; George H. Harper, Dundas; J. E. Pearen, Brampton; Alex. Wood, Smith's Falls; A. Plewes, Markdale; J. O. Flavelle, Lindsay; David Elder, Elder's Mills; H. A. Mulhern, Peterboro; F. Rollings, Madoc; J. F. Dafoe, Napanee; S. P. Stuart, Mitchell; J. C. Vanstone, Bowmanville; Robert Shirra, Caledonia; Thomas Bell, Erin; J. A. Breckenridge, Mattawa; T. O. Kemp, Seaforth; A. W. Carveth, Laskard; G. G. Bechtel, Burford; R. Noble, Norval; H. Shaw, Cainsville. Other large firms were represented as follows: Foulds & Co., Onandaga; Shaw & Co., Port Dover; Wright & Son, Owen Sound; Wanzer Bros., Ayton; Dobson & Campbell, Beaverton; Moyer & Co., Listowel; J. Hamilton & Son, Glen Huron; and Plewes & Spence, Creemore.

REPORT EXECUTIVE COMMITTEE.

Secretary Watts read a report of the Executive Committee, setting forth the work accomplished at its recent meetings, more especially the meetings of February 25 and March 9. These were reported in the March number of the MILLER and dealt with the question of incorporation and the draft bill that had been prepared by the executive; certain action taken re the Newfoundland troubles, with a report of the visit of delegates to Ottawa; also an account of an interview with Mr. Mial, Commissioner, of the Department of Inland Revenue. The report was received and adopted.

INCORPORATION.

The particular purpose for which the Association was called together was to consider a draft bill of incorporation that had been prepared by the solicitor, acting in conjunction with a special committee appointed from the executive. The major portion of both the afternoon and evening sessions was taken up in a discussion of the terms of the bill itself, and afterwards of the by-laws in connection therewith. The bill is modelled to some extent after that of the Toronto Board of Trade, including important clauses, that were enlarged and improved in convention, touching the scope and uses of arbitration in settling difficulties between the members. The document is simple and yet comprehensive, and when each clause was thoroughly explained and threshed out by the members, the bill as a whole received their unanimous and hearty approval. It will give to the Association a locus standi in important trade matters that would always have been unobtainable so long as it remained simply an open, or, paradoxical though it may seem, an unorganized organization. The bill received the necessary signatures before the convention closed, and was forwarded to Ottawa the following morning in order that it may, if possible, be pushed through this session of Parliament.

SEED WHEAT.

No inconsiderable discussion arose out of a letter written by J. C. Vanstone, of Bowmanville, Ont., condemning in vigorous terms the growing of Colorado spring wheat. The letter was supplemented by a series of communications from the pen of Mr. Vanstone that had appeared in the local press of the town. T. O. Kemp, of Seaforth, expressed the opinion that there were two kinds of wheat going under the same name. He had seen a Colorado wheat that when placed in the mouth had, in an eminent degree, the gumming qualities of the best milling wheats. This was admitted by others to be the case, and apparently was a peculiarity of Colorado wheat. All, however, who had actually put it to a milling test were unanimous in their condemnation of it. H. A. Mulhern, of Peterboro, said that Colorado was grown in that section; it weighed heavy, but had a weak effect, and he had found it very unsatisfactory. J. O. Flavelle, of Lindsay, would like to see it out of the country altogether. E. S. Edmonson, Oshawa, believed the opinion should go out from this Association that the Colorado was an undesirable spring wheat from every view of the case. J. L. Spink, Toronto, thought that perhaps Colorado was equal to goose wheat. President Peplow remarked that whether Colorado wheat gummed well or not, it was a poor wheat; he did not want any of it in his mill.

The outcome of the discussion was the following resolution unanimously adopted by the Association: "Whereas the variety of bearded spring wheat largely grown in the eastern, northern and midland districts of Ontario during the past two years, known as Colorado spring wheat, has been thoroughly tested as a milling wheat and found very deficient in all the properties that go to make up a good milling wheat, being deficient in strength and very yellow in color, and a poor flour yielder; and whereas its value as a milling wheat is not of greater value than the price of goose wheat, if equal thereto; therefore, this Association would strongly recommend the farmers to discard this variety of spring wheat and cultivate some one of the other varieties that are known as good milling wheats."

ANOTHER SEED WHEAT GRIEVANCE.

Mr. T. O. Kemp asked if it was not possible that the different seed wheats being introduced into the country could each be known under some one distinct and particular name. At present there are many different names given to the same wheat, in this way causing considerable confusion. E. S. Edmonson thought some step of the kind was necessary. J. Hamilton, of Glen Huron, observed that one cannot tell whether a wheat is good or bad until one goes to grind it. John Brown, in answer to a remark that some protection should be given the farmer against the many so-called new, yet worthless, wheats placed on the market, said it was difficult to know sometimes what was old and what new in wheats. He could produce a sample of what is to-day known as goose wheat, that was grown in this country forty-seven years ago. With a view of remedying the trouble suggested by the discussion the following resolution, moved by T. O. Kemp, and seconded by John Wright, was unanimously carried: "That whereas one and the same variety of wheat is frequently introduced in the Dominion for seed purposes under various names, making it difficult for any person or persons appointed for the purpose of pronouncing upon any one variety without reflecting on others; and whereas farmers are frequently misled into purchasing and seeding with very inferior varieties greatly to the injury of the country in general, and themselves and the millers in particular; therefore, be it resolved that legislation be sought making it compulsory that the various kinds of wheat in the Dominion, or that may hereafter be introduced in the Dominion for seed purposes, shall be examined and tested by a board appointed for that purpose, whose duty it shall be to determine the names by which such varieties shall be known throughout the Dominion, and to describe as fully as possible, both as regards the grain and its natural growth, in order that it may be readily distinguished from any other variety so far as possible; that such penalty for selling it under any other name be fixed as may be thought wise by the Government; such board of examiners shall consist of one or more professors of agriculture as may be appointed by the Government, and two or more members of the Dominion Millers' Association, as may be appointed by the said association."

THE NEWFOUNDLAND AFFAIR.

The Newfoundland matter was by resolution referred to the Executive Committee with instructions to act as conditions and circumstances might make necessary.

At 11.30 p.m. the convention was brought to a close, to meet in annual session, as provided in the bill of incorporation, in July.

CONVENTION CHAFF.

President Peplow ably filled the bill, as everyone had expected.

Beat J. L. Spink, if you can, with a clever piece of epigram, as witness his compression of the Colorado wheat discussion into the one sentence: "Colorado spring wheat ain't worth a cuss."

Is there a miller in Canada who can afford to remain out of the Dominion Millers' Association? If anyone thinks so it would be interesting to know what is their basis of figuring.

Mr. T. O. Kemp, manager of the large Seaforth mills of W. W. Ogilvie, showed in his remarks on the seed wheat discussion the thorough and practical grasp he has of the real essentials of successful milling.

Who can object to the breadth of the Millers' platform as outlined in their bill of incorporation? It is made to include those who are engaged or identified even in a remote degree with the business of milling. The mill-furnisher will not be excluded.

How everyone missed the jovial face of the late president, Thomas Goldie. The resolution of condolence to the widow and family, ensconsced in handsome morocco cover, fittingly, yet in slight measure, expressed the deep-down feelings of every member.

A GOOD SUGGESTION TO ADOPT.

EVERY mechanic should have a library of his own, no matter how small. A library, even if it only consists of two books, is of value. Once the habit is formed of purchasing books, it is surprising how soon a creditable collection of books will be secured, and what a benefit they will be to the owner. The mechanic unaccustomed to the use of books has no idea of the benefit to be derived from them. He does not know that the use of books will fit him for a better position, and enable him to earn better wages and do better work.

It is a good plan to set aside a certain sum each week or month to be applied to the purchase of books. Here the mistake of buying the wrong books must not be made, or the money will be wasted. Some men, once in the habit of acquiring a library, buy books merely because they are books, and will help to fill the shelves and make a show. Avoid all such nonsense. Buy books as tools are bought, because they are needed, and they will be a benefit to their purchaser.

THE FIEND OF THE MONKEY-WRENCH.

THE engineer who is always trying to improve the engine, as it came from the maker, with generous use of the monkey-wrench, has his counterpart in many operative millers who are always "improving the system" to which the mill was adapted by the mill furnisher. You will always find him tearing something out and putting something else in, but seldom with a definite idea of what he wants to do, or how to go at it, beyond a vague notion that somehow he will make an improvement at this particular point that will paralyze the owner Usually it has this effect, but not in the way intended by the ambitious operative. We do not refer to the class of active-brained men who study out the causes of failure and apply a remedy that has been well considered, but of that large class who, the moment something goes wrong, immediately begin work with the monkey-wrench. It is unsafe to meddle with a machine or a part of a mill until the exact cause of the trouble has been ascertained. It often happens with a mill that the cause of trouble is quite remote from the point where it first becomes visible, and it requires long experience to determine where to look for it. Not that a mill programme of any size can be put in by the most experienced mill furnisher that will be right from the start, or where considerable attention would not be necessary, or that a mill will ever be successful without the intelligent oversight of a competent miller; but where the miller is not thoroughly competent he will likely do more harm than good by trying to "fix it up." We have seen some of the best standard machines on the market rejected by the buyer because an ignorant, but well-meaning operative, in putting it together, had got it together wrong, or who in trying to doctor it had made it worse. Young millers and others who have charge of machinery are usually quite gifted with a desire for experimenting, and seldom consider that the maker puts his machine in all right. Old and experienced men when they meet a difficulty, search its cause before doing anything, and then, if it is not of trivial nature, apply to the maker to fix it himself.

THE Canadian MILLER AND GRAIN TRADE REVIEW

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

MILLERS INCORPORATING.

CANADIAN millers, by a unanimous vote at the Convention on the 30th ult., decided to seek powers of incorporation from the Dominion Government. Many members have labored patiently and long to see this work accomplished, and all that is required to consummate their work is the legislative endorsement of Parliament. The draft bill approved of by the association is now in the hands of a member of the Commons and it is hoped will be pushed through this session. It has been intimated to Secretary Watts that it might be necessary to throw the bill over until the House meets next year, owing to the pressure of business on the order papers. This statement was based on the theory that the session would be brought to a close at an early date. Developments of the past week change this supposition, and it does not look likely that an adjournment will take place before July at the earliest.

However weighty may be the matters of State that must engage the attention of our legislators in the next two months this question of incorporation cannot be allowed to take any unimportant place. It affects one of the largest commercial interests of the country, which occupies no isolated position in a few particular centres, but mills and millers are everywhere throughout this country. Every township is particularly interested in the success of Canadian milling. The millers are handicapped in their work without the strength that comes of an incorporated organization. To throw incorporation over for another year is something that simply cannot be considered for one moment.

BUSINESS HOMILETICS.

HOMILETICS is not in the line of commercial journalism and its conductors are not called upon to devote any considerable space to questions of business morals. We expect business men to be guided by those commonsense rules that teach them, even when no higher motive prevails, that honesty is the best policy, and that any deviation from this law will certainly bring its own retribution. And yet there is in the general practice of business a violation, frequently enough, of these well-fixed canons of business, to make it necessary for organizations of business men and commercial journals to sound the note of warning and plainly condemn known dishonest practices.

At the Dominion Millers' Convention in December it will be remembered a resolution was unanimously passed reproving in vigorous terms the practice that had come under the notice of the association of certain millers, who were shipping to their clients flour that was short in weight. A month or so later the Board of Trade felt called upon to move against a dishonest grain dealer in western Ontario, who had been mixing frozen Manitoba wheat with Ontario wheat and shipping it to exporters as Ontario wheat. Reference is made in our trade review of this month to a letter written by W. P. Howland & Co. showing the favor with which two-rowed barley is received in the English markets over six-rowed, when the berry is even. But the practice with farmers is to mix two-rowed and six-rowed, and consequently Canadian barley becomes in a measure prejudiced in the eyes of the English dealer. At the present time this city has at least one grain man whose methods of doing business are so disreputable, that if decent men are going to remain in the trade he will have to go out.

We do not say that these practices, in any of the particulars named, flour, wheat or barley, are alarmingly frequent. Enough to know that they do exist, to commend the prompt steps taken in each case to expose the practice and, if possible, nip it in the bud. The serious view from the business side is unfortunately this: The foreigner who does business with us, takes the exception to be the rule, and the operations of the entire trade are brought down to the level of the dishonest dealer. Under no circumstances, viewing business methods from a proper ideal, can business men allow these conditions to obtain a foothold. Particularly is it so with Canadian millers and grain merchants, whose hope of increased trade is with foreign countries.

THE MILLER'S INTEREST IN SEED WHEAT.

THE farmer is not one whit more interested in the sowing of first-class wheat than is the miller in seeing that such wheat, and only such wheat, is sown. This fact was incidentally, but very suggestively, illustrated in the discussion at the Dominion Millers' Convention a fortnight ago on the question of Colorado spring wheat. The farmer primarily had no occasion to be dissatisfied with his return from the seeding of this particular grade of wheat. It was only when the miller had ground it into flour and discovered its disappointing qualities that the farmer found that he would lose his best customer. The farmer, in any of the counties where this wheat has been grown, who, in the face of what he has learned from the millers, would persist in growing Colorado, would quickly find that he had loaded himself up with a most unsaleable article.

Millers are so closely and directly interested in the growth of first-class milling wheats that they cannot afford to lax any effort that will prevent the growing of an undesirable and poor quality wheat in their several districts; and furthermore, that will secure the use of only such seed wheat that out of their experience as millers they know to be undoubted in milling parts. It will pay millers to make a selection of first-class seed wheats, purchase a reasonable quantity, and dispose of these to the farmers in their section at actual cost. If the farmer does not buy from the miller he is going to buy from someone else, whose interest is to sell the stocks in his warehouse, rather than any consideration for the character of the seed after it has gone through the natural courses of germination and fructescence and finally passed into the hands of the miller.

What we say here has a special significance in its relation to spring wheat and is one of these matters that should not be simply considered by the miller, but is a case that calls for action.

GRAIN INSPECTION.

THE MILLER has published no little lately in the way of interviews, communications and editorial comment, touching the question of the grading and inspection of wheat. More friction and unpleasantness in grain circles is resultant probably from unsatisfactory inspection than from any other one cause.

A letter in a recent number of the Monetary Times, signed "Grain Man," Winnipeg, Man., is somewhat suggestive in a number of particulars. One suggestion of this correspondent is that Montreal, Toronto and Winnipeg each appoint an inspector, all to be residents of Winnipeg, any certificate to be signed by at least two, and no new certificate to be issued after the one inspection.

We are told that "the grade of a car of grain is given on the casual glance of half a palmful of grain—not in every instance, but the writer has seen it, and the result is unsatisfactory to both shippers and receivers. Of course it can always be said that this would cut both ways, but if a farmer ships a car of wheat on grade, and the inspection goes a grade lower than the quality of wheat really deserves, then the farmer loses $66; and if the grade goes one higher than it really is, the receiver loses $66. Too much care cannot be given to the question of grade. The writer has had experience of a difference between two official grades of the same wheat in the same cars, where the difference in cash result on certificates actually was $205 for three cars. Such a thing as this ought to be an impossibility. The system at present in vogue is for wheat to be graded in and out of Fort William elevators. That is, if you ship twenty cars to Fort William you get twenty certificates, one for each car; but you can get one certificate for the quantity shipped, only it is permissible for a shipper to order out inferior wheat to go with it, and still get a No. "2 Hard" certificate even when the best of his wheat only graded "2 Hard" originally. This should also be an impossibility. If our wheat grading gives "2 Hard" for a certain quality let the country get the benefit of superior wheat tenders. There is no injustice done the shippers by making them tender original grade certificates; or, if necessary to avoid bulk, let one certificate be issued in exchange for the originals. The grading can all be done in Winnipeg by the inspection committee, and the cars can be unloaded at Fort William according to that inspection and primed up according to grade. Another point is also of vital importance, and that is that any person drawing samples of wheat for certificate purposes should be put on oath that they were truly and properly drawn. The writer, too, heard on the highest authority that a car of wheat of high grade would be given a grade higher if going to North Bay for orders than it would if unloaded at Fort William, to allow for the messing about it would get. Surely on so great a question as the proper handling of our only article of export, it is at least worth a little more earnest attention than it gets at present."

ELECTRICITY IN FLOUR MILLING.

THE electricians have recently been telling of the marvellous growth of the uses of electricity within a decade. In 1882 not more than 15,000 incandescent lamps were in use in the United States and Canada, now there are over 5,000,000. Electricity has been applied to the propelling of street cars in nearly all the large cities on the continent, and as a means of driving our mills and factories it is coming more extensively into use every day. It has been found possible during the past year to transmit 300 horse power in electricity a distance of 100 miles. Its application to milling whereby the system of innumerable belts, shafting and gearing required to transmit the power of the engine to the many stories and different parts of a mill would be supplanted by a system where the engine would transmit the power by wires, to various points where small electric motors would communicate it directly to a line of similar machines on a floor has, as yet, been rather insignificant. We learn, however, from our milling contemporaries, that the system will soon have a practical illustration in a mill now being built at St. Paul, Minn., to be operated by electricity. "The experiment," it is aptly remarked, "will be watched with great interest, and the success of the Edison company in so arranging the Schenectady works of that corporation, leads to a belief that the experiment in a flouring mill will be equally successful. The power house is situated almost in the middle of a piece of land twelve acres in extent, and is surrounded on all sides by the different buildings to which it supplies the necessary power. This house contains a battery of boilers of over 2,000 horse-power capacity, the engines necessary to drive the electric generators, and the generators themselves. Radiating in all directions run the conductors through special Edison underground tubes, to the different buildings, where they are connected to Edison motors, which in turn are connected by belts to the shafting serving to operate the machinery. Whether the fifteen per cent. of power lost in transferring the energy of the steam engine into electricity, will be overbalanced by the gain induced by throwing out large quantities of friction producing shaft journals, gearing and slipping of belts, is the real question. But there is no doubt but that in large mills the economy of transmission will lie on the side of the wires. The original costs of the two systems, and the matter of relative maintenance, are also among the things requiring demonstration."

Office of the CANADIAN MILLER,
April 14, 1892.

THE GENERAL SURVEY.

A LOCAL cartoonist illustrated the situation of wheat a few days ago with a representation of a moderate sized bear set squarely on top of a good sized animal of the bull specie, who was firmly pinned to the ground, whilst not a sign of relentment was visible in the expression of the bear. The representation was apt. Memory does not readily recall when a more decided slump has taken place in wheat. The history of the entire month has been one of depression, the conditions becoming accentuated within the week of the present writing. Three days ago May wheat touched the lowest quotations for two years past.

The Chicago Times, of recent date, says: "The wheat trader now, almost to a man, is in his own market a bear. There is more unanimity at this moment in the belief in lower prices than there was at ninety cents; a good deal more than there was at $1. Yet the price has declined ten cents a bushel in a month; fifteen cents in three months. For some reason the environment of a speculative market is against first principles. The Chicago crowd—well, there are very few believers in wheat at eighty cents where there were legion at over $1. Special reasons? There is never any lack of special reasons. There never was a price and never will be when the reasons for an advance do not seem to be just about as good as the reasons for a decline. The opportunities for the application of a general principle in speculation are not nearly so numerous; come sometimes not once a year; only come after very long advances or very long declines. There were any number of special reasons why it did not look safe to sell wheat last August at $1.15; just as many why it seemed foolhardy to sell corn last year in the 60s. or to buy it the year before in the 30s."

The March report of the United States Government has been a considerable surprise to holders of grain. It shows stocks of wheat in farmers' hands of 171,000,000 bus. A year ago the stocks were 112,000,000 bus., two years ago 156,000,000, while in 1885 they aggregated 169,000,000 bushels. This is a significant statement when the large exports of wheat are taken into consideration. Within a year the shipments aggregated 205,000,000 bushels. The natural inference is that the estimated crop of 612,000,000 bushels in 1891 is not an extravagant one, but possibly much below what was reaped.

Mr. H. Kains Jackson, an English agricultural writer of some repute, in his review of the British grain trade, summarizes the situation in this manner: Neither stocks in hand; neither supplies in sight; neither the date of the season, and its prospects, sanction any further decline in the price of wheat and flour. Not until another and fair harvest is reaped and secured would sound trade be excused if it forced down good foreign wheat below the 35s. to 39s. now accepted, or sound good flour below 26s. per sack; or English wheat below this week's London average of 34s. 4d. per quarter. Apart from the question if the above terms are not really too low for the situation, the tendency of values further downwards must be characterized as a market mistake, a commercial blunder, and a swing of opinion the wrong way. The stores in the cupboard are only such as the nation as a housekeeper should keep. Such is the case at home and abroad. In the six years 1885 to 1890 the annual price of English wheat, 29s. 9d. to 32s. 10d., sickened farmers all over the world and checked production. The average of 1891 was 37s. and farmers at home and abroad took fresh heart, and this reasonable level was thought likely to be maintained, particularly as it was established in the season when from the first America had the promise of a bumper crop to balance expelled European deficiencies. Yet in March, 1892, we have returned to the imperial average of 32s. 11d. when there is not a prospect in a single country of a large harvest. The markets are living upon their principal without knowing what will be their income.

WHEAT.

Prices at time of writing are as follows: Liverpool, Eng.—Wheat spring, 7s. 6d.; red winter, 7s. 6d.; No. 1 Cal., 7s. 5d. London, Eng.—Beerbohm's report says: Floating cargoes. Cargoes on passage—Wheat, American advices cause depression. Mark Lane—Spot good, No. 2 club Cal. wheat, 31s. 6d. was 32s; present and following month, 32s. 9d. was 33s. 3d.; good cargoes No. 1 Cal. wheat, off coast, 36s. 9d. was 37s.; do. Chilian, off coast, 35s. 6d. was 35s. 9d.; present and following month, 35s. 6d. was 35s. 9d.; do. Walla, off coast, 35s. 6d. was 36s.; present and following month, 35s. 3d. was 36s.; do. mixed. American: Chicago—Wheat, No. 1, April and May, 79¾c.; July, 80c. Duluth—No. 1 hard, 80¼c. for cash; 81½c. for May; No. 1 northern, 78½c. for cash; 79½c. for May. St. Louis—85c. for cash; 84¼c. nominal for April; 83⅞c. bid for May; 78⅞c. for July. Canada: Toronto—Odd cars of white and red sold north and west at 85c. straight, and the same was bid for more, with sellers at 86c. Goose, 77c. No. 1 hard at $1.05. Extra, No. 1 hard, sold at $1.07. North Bay—No. 2 hard sold at 95c. and 97c. North Bay; on call there were sellers at 96c. with buyers at 94c. to arrive. No. 1 regular sold at 76c., North Bay; it offered on call at 76c. in store Montreal, with 70c. bid. No. 1 northern offered at 98c., North Bay, with 95c. bid. No. 2 northern offered at 85c., North Bay, with 84c. bid. No. 1 white Fyfe offered at 98c. Winnipeg, Man.—No. 2 hard, 84c. to 85c. afloat for May delivery at Fort William, and 95c. delivered at North Bay; No. 3 hard, afloat May, 73c. to 74c., and 85c. to 86c. North Bay. No. 1 regular, 46c. to 47c. on track, Manitoba points, and 64c. to 65c. afloat; No. 2 regular, 36c. to 37c. Manitoba points, and 53c. to 54c. afloat.

BARLEY.

In a letter written to a correspondent, W. P. Howland & Co. advise farmers to again grow two-rowed barley, with the caution that they grow it on good land and use good seed. They do not anticipate that the American duty will be reduced; their shipments of two-rowed made to England were satisfactory when the berry was uniform. This, however, was not always the case. "A great many of the parcels," we are told, "were made up; although the average weight was heavy, they were uneven samples, and we regret to say that the farmers put in some six-rowed with the two-rowed." Early in the season the firm say they were paying 10 to 15 cents per bushel more for the best two-rowed than for the best color six-rowed. "Just now," they add, "there was a difference of 5 cents per bushel in favor of the two-rowed, and there would be a larger difference if the farmers could give an even sample. They must trust to the barley turning out 54 pounds in weight. English brewers don't care for less weight."

Throughout the month there has been the usual dullness in the barley markets. Perhaps, if anything, prices have been a little firmer, and yet indefinite enough in this regard to make it difficult to say what prices on the local market are really prevailing. Report says American markets are dull. No. 2 western offered at 63c.; No. 2 Canada, 82 to 83c.; No. 1 Canada, 86 to 87c. bid, with 90 to 91c. asked; fair to best Michigan, 55 to 60c.; sample western, 50 to 51c. Oswego and Albany: Quiet and unchanged. New York: Dull; No. 2 Milwaukee, 68 to 69c. Chicago: Nominal; No. 2, 55 to 62c. Milwaukee: Steady; No. 2, 54¼c.; sample, 42 to 59¾c. St. Louis: Nothing doing.

OATS.

There is no important change for the month. Local sales have been made at 31¾ to 32½c.; mixed outside 28½c.; White, east, 32c.; Oswego: Extra No. 1 white, 44c. Buffalo: Sales at from 34½c. to 37c.

PEAS.

In somewhat better demand, 59c. being a pretty steady quotation.

RYE.

Only a nominal trade doing. Toronto prices 80c.; outside 76c.: Chicago, No. 2, 75c.; Buffalo, No. 2, 88c. on track.

USEFUL INFORMATION.

There is but one really sensible thing to do for an overloaded engine—replace it with a larger one. Various makeshifts may be resorted to, but can not give the satisfaction desired. An overloaded engine is a heavy clog on the earning capacity of an establishment.

The most prolific source of fires in a grain elevator is the elevator head. Watch the elevator heads closely and keep the bearings well oiled. In steam power elevators where slack coal is used, fires are frequently caused by spontaneous combustion. Slack coal should be kept dry and, if possible, it should be so placed that it can burn up without setting fire to the boiler house.

Will iron rust cause fire? A good authority says it will, and that when the oxide of iron comes in contact with wood away from the atmosphere the oxygen that was in the iron leaves it and what remains crumbles into small particles of metal with such an affinity for oxygen that as soon as exposed to the atmosphere it becomes red hot, capable of igniting wood very readily. This furnishes a good reason for keeping a lookout for rusty metal that scales off and drops from pipes and other metallic substances employed in mills. Particularly should out-of-the-way and dark corners be frequently and carefully cleaned.

WAS it the types or was it the miller that twisted the following advertisement, which appeared, as we give it, in the columns of the Standard, of London, Eng., a few days ago?

> TO MILLERS—TO BE LET, A WINDMILL, containing three pairs of stones, a bake-house, corn-shop, and about five acres of land, dwelling house and garden.

But others besides millers and types give some strange turns to the Queen's English as taught to-day. Only the value of space just now for things more practical tempts me to hold back an interesting collection of bric-a-brac on these lines.

* * * *

The gentle invitation in this column two months ago to our milling friends throughout the country to send reminiscences of their milling experiences and business has brought us some interesting information of the Mountain Roller Mills, situated in the county of Dundas, one of the most fertile districts in Eastern Ontario. A property surrounded with many of the advantages afforded to the milling trade of this fair country, yet during all the years up to 1885 the site upon which the property now stands, including the village of Mountain, was little better than a desert waste. The time came when the desert was made to blossom like the rose. The Canadian Pacific Railway located one of its depots in the township of Mountain, and the prosperity of the village is to be marked from the time of this event. In 1887 Mr. A. S. Bowen, a gentleman of experience and effort, energy and enterprise, erected a modern roller mill on a site adjoining the railway depot. This he has worked successfully from that day to the present. The mill is built on what is known as the Greey system, by the well-known mill furnishers, W. & J. G. Greey, of this city. The motive power is attached by belt to end of main line, from there to mill, the rope drive transmits the motion, which works noiseless and positive. The engine is of the Leonard Ball type, running 273 revolutions a minute, and 60 h.-p., which ran the mill up to 100 barrels per twenty-four hours. The flours made are of the highest order, and have been well termed the household jewels of Dundas Co. Mr. Bowen, the proprietor, is a descendant of a successful race of pioneer settlers in Dundas, and no man is better or more favorably known throughout his section of country.

* * * *

"It is no use for a miller to try to get rich by buying grain for cash and selling flour on time. If he wants to loan money he need not go at it in such a roundabout and dangerous way." This is the short, snappy way I heard the credit system sized up the other day. Full of meat, is it not, brother dusties? The miller gets no credit when buying grain. He is not like his neighbor, the dry goods man, who may perhaps give a four or six months note for his season's purchases. Farmers will take all the credit they can get, but you don't catch them allowing their golden grain to go out in this risky fashion. And yet how many millers buy for cash and sell altogether on credit? I know I am talking on a threadbare topic, but it is a case where "line upon line" is very necessary. What say you, friends; should not the plug be put in now?

* * * *

We have had not a few interesting stories told of the "master passion strong in death." The broker who went to church the other Sunday, the first time in years, was not exactly taking his last sleep, but he was having a comfortable snooze all the same. He was curled up in a cosy corner, and though in church he dreamed of stocks. The minister took his place in the pulpit. "The Lord is risen," he said in full voice. The broker started up suddenly. "How many points?" he blurted out; and they cast him forth.

The Little Wonder REEL

Is Cheaper at Double its Price

Than any other Reel as a Gift

Chatham, Ont., April 8th, 1892.

Wm. and J. G. Greey, Toronto, Ont.

Gentlemen,—We have been running your Little Wonder Reel now for some two weeks and it is giving splendid satisfaction, being just what we needed to make our second grade of flour lighter in color and of even make. Your draft for same has been presented and paid.

We may require another of the Reels in the near future; meantime, we are

Yours very truly, Campbell & Stevens.

UNEQUALLED FOR BOLTING OR RE-BOLTING ANY STOCK IN THE MILL

SO SMALL, IT GOES ANYWHERE

RUNS SO EASY, NO TROUBLE TO DRIVE

WM. & J. G. GREEY 2 CHURCH STREET

TORONTO, ONT.

Qu'Appelle farmers are moving for an elevator.

John Moir, grist mill, Holland, Man., has assigned.

Saylor's mill, at Tiverton, Ont., is being overhauled.

Flour is now being exported to China and Japan from Victoria, B.C.

Subscriptions are being solicited for a farmers' mill at Lisle, Ont.

A chopping mill is being erected at Black Bank, Ont., by J. W. Rinn.

Harris & Grant, grain dealers, Winnipeg, Man., have dissolved partnership.

The ground in many parts of the country is in favorable condition for early seeding.

McKay & Guest's grist mill, at Renfrew, Ont., was totally consumed by fire on the 26 ult.

John Oliver, a practical millwright in the employ of Mr. Cargill, of Cargill, Ont., is dead.

The farmers of Miami, Man., are talking of getting up a joint stock company to build a grist mill.

The Indians of Crooked Lakes' Reserve, N.W.T., are proving themselves to be successful growers of wheat.

Collingwood ratepayers have voted almost unanimously to spend $15,000 for the purpose of dredging the harbor.

Charles Armstrong, miller, Guelph, Ont., writes: A great lookout for winter wheat in this section this spring.

Sneak thieves broke into Wm. Milne's grist mill, at Ethel, Ont., but managed to secure only ninety cents in stamps.

John Lummis is erecting a roller mill at Wyebridge, Ont.; capacity fifty barrels per day; to be operated by water power.

Sir Charles Tupper is en route to Madrid, seeking to maintain and extend our good relations with Spanish West Indies.

The annex to elevator "A," Fort William, Ont., is completed. This increases the storage capacity there by 1,250,000 bushels.

Johnson, elevator man, of Minnedosa, Man., contemplates starting a machine shop at Neepawa. He wants exemption from taxes.

At Hartney, the new Manitoba town, 350,000 bushels of wheat were marketed the first year, and about 200,000 are yet to be marketed.

Three hundred and fifty acres of wheat have already been sown on the Canadian Agricultural company's farm, at Namaka, Alberta.

Hall, Ross & Co., Victoria, B.C., have distributed forty tons seed wheat in the Delta, agreeing to purchase the wheat in the fall at $30 a ton.

The Western Milling Co., of Regina, Assa., have had powers granted to increase the capital stock of the company from $40,000 to $100,000.

A local correspondent from Elk Creek, Chilliwack, B.C., writes to say that a grist mill has been erected and is now in operation at that place.

N. Maynard, who is in the flour and feed business at Dunham, Quebec, has decided to build a new store for the better accommodation of his trade.

James H. Pethick, of Millbrook, Ont., was killed a fortnight ago by being caught in the gearing of a grain crusher. He had only been married a few months.

At the Frontenac Assizes, held recently, the hull-less oats case was dismissed, the judge holding that the defendants, or alleged "sharps," had maintained their case.

Manager Thompson, of the Ogilvie mills, Winnipeg, Man., who has been in Florida seeking better health, is expected home during the month, feeling the benefit of his trip.

D. McLean, of Lakefield, Ont., will build a 100 barrel flour mill, at Calgary, Alberta. The town gives a bonus of $3,000 and exemption from taxes for ten years, he to find his own site.

C. R. Clough & Co., dealers in grain, flour, etc., of Lennoxville, Que., have been compelled to make extensive alterations and improvements in their premises to meet their growing business.

Portage la Prairie, Man., where there is now a 600 barrel mill, is to have a mill built by the farmers of the district, having a capacity of 100 barrels. A local stock company will build a 100 barrel mill, at Gainsboro, Man.

It is stated in a leading Winnipeg paper that 16,000,000 bushels of wheat have already been taken this season from the farmers' hands in Manitoba and the Territories. This would mean an average of over 500 bushels for each farmer in the country.

Continued activity is showing itself in the building of elevators in Manitoba. At McDonald Station, it is said, the farmers will build a 100,000 bushel elevator. At Burnside another elevator will be erected. Belmont is also to have an elevator.

According to the Empire, some Canadian millers and grain dealers are moving quietly to have a clause inserted in the Canadian Inspection Act, providing that the inspector who, through neglect or wilfulness, issues wrong inspection certificates, shall be liable to imprisonment.

A dispatch from Winnipeg, Man., says: Grain men here are considerably agitated over the fact that all the elevators and yards at Montreal are full of grain, and the company is unable to furnish further storage. The grain men are now praying for the opening of navigation.

Mr. R. H. Reed, of Douro, Ont., last year sowed two and a half bushels of two-rowed barley on barely two acres of land. From this he reaped 104 bushels of grain that weighed 55 lbs. to the bushel. He has sold about sixty bushels, will sow a quantity this year and has a quantity on hand.

A grade of Red Fyfe wheat, grown on the farm of Joseph Faillefer, at Lac Round, in the Qu'Appelle valley, is reported to be of an exceedingly fine quality, and it is likely that the local agricultural society will purchase twenty-five bushels of this wheat and send it to Winnipeg for competition at the summer exhibition.

Mr. Angus Mackay, of the Indian Head Experimental Farm, urges on Northwestern farmers to go in more for mixed culture and not exclusively for wheat. Growing half the wheat they now do, they will be able, he says, to get it all in safely ere the frost comes, and they can make up for the diminution of wheat by the growth of other crops.

It will be remembered that several months ago Esterbrook's grist mills, at Tweed, Ont., were destroyed by fire, the cause of which was not distinctly known at the time, but the matter was solved a few days ago. Workmen, while excavating on the site of the fire, found human bones, and the conclusion is that a tramp had probably laid down his pipe before the fire in it was out, and went to sleep. In this way the fire may have started, and before he could escape he was roasted alive.

James Malcolm Fraser, who for the last thirteen years was customs appraiser at the dock in Windsor, Ont., died on the 1st inst. of paralysis of the heart. He was on duty as usual the Wednesday before. Mr. Fraser was born in Aberdeen, Scotland, seventy-three years ago, and came to Canada when a lad of eighteen. He settled in Galt and went into the dry goods and grocery business with Adam Warnock, where he remained for twenty years or so, being very successful. He then bought the flouring mills at Elora, Ont., where he met reverses, burning out three times. It is said that he still had considerable money, and to retrieve his losses went upon the Chicago Board of Trade and dropped his pile. After he was financially ruined, he was given a position in the customs department by Sir John A. Macdonald, who was a firm friend of his, and thirteen years ago he was transferred to Windsor.

Mr. S. A. McGaw, at a banquet given by the Board of Trade, of Winnipeg, Man., in response to the toast "Our Manufacturing and Milling Interests," gave an interesting history of milling in this country, from 1815, when the first wheat was ground by mills brought by Lord Selkirk. One of these was built of two stones, three feet in diameter and three inches in thickness; its capacity was five bushels in twenty-four hours. In 1864 a small grist mill was established at Fort Garry; its capacity was twenty-five bushels in twenty-four hours. In 1876 flour was imported by the Red River and sold for the sweet sum of $8 a barrel. Mr. McGaw told of Ogilvie & Hutchison, of Goderich, obtaining some Manitoba wheat as an experiment, paying about $1.22 a bushel for it. In 1882 stone mills were used; the total capacity was 700 barrels per day throughout Manitoba and the Northwest. To-day the milling capacity, including the mills at Keewatin, is over 8,000 barrels per day, and they can grind up to something like 40,000 bushels per day. Of the crop of 1881 there were only 272,000 bushels to grind. At that time the Ogilvie mill was started in Winnipeg. Mr. McGaw spoke of the improvements continually going on in roller mills, and of the many distant markets found for Manitoba flour; comparing the crop of 1891 with previous crops he said there was a lack of strength which had been increasing from year to year owing to farmers sowing poor seed. He showed the serious injury resulting from smut; the expense of cleaning being ten cents a bushel, and the effects being even then not removed.

A. J. Sawyer, a prominent grain man, of Duluth, is dead.

It is stated that the Columbia Cereal Co., Chicago, will locate an oatmeal mill to cost $100,000, at Yankton, S.D.

The Millers' National Association, of the United States, is to meet in Chicago on May 24 and 25 instead of June 1 and 2, as first announced.

A reciprocity treaty has been made with the Government of Nicaragua whereby corn meal, barley, Indian corn, wheat, oats, rye and rice from the United States, will be admitted free of duty on and after April 15.

R. E. Whittaker and Charles H. Smith, the two clerks who were reported to have embezzled $60,000 from Lamson Bros. & Co., with which to plunge in the Chicago wheat pit, have been arrested at Chicago.

At Catlettsburg, Ky., on the 10th inst., the flour mill of J. G. Patton & Co. was burned. Loss $50,000. Charles McCoy, the miller, was burned to death. He was to have been married in a few days to a young lady of Catlettsburg.

A dispatch from Duluth is to the effect that the Duluth Imperial Mill Co. is this week making a second annual apportionment of profits to employees, on the system of profit-sharing inaugurated some time ago. The system was started by the taking out of life insurance policies by the company on each employee, of from $1,000 to $2,500, and in this way $3,000 was distributed. This week about $5,000 will be distributed, and this goes to about 150 men.

India is draining her wheat to the last bushel to take advantage of the higher prices caused by the European shortage of 1891. Notwithstanding the famine in some important provinces of India, and the bad outlook for this crop, the wheat dealers in that country have scraped together a grand total of 55,000,000 bushels for exportation to Europe between April 1, 1891, and March 25, 1892. This total breaks the record for India, and it utterly wipes out her reserves of wheat. Should the 1892 crop turn out badly, India will not figure large as an exporter during this season.

A Chicago contemporary says: In the near future Chicago will doubtless lose most of her grain trade to South Chicago. The migration of the elevators to the Calumet region has long been expected and has apparently now commenced. Counselman will this year build a great elevator there and it is said that three other companies will follow his lead. The Calumet region is the natural clearing house between the east and west for grain, lumber and all bulky products. It is a matter of surprise that the city was not originally built there. It has grown out to Lake Calumet, however, and South Chicago now has a population of over 50,000.

Owing to the comparative scarcity of water power in many parts of England for the generation of power for electrical purposes, attention has been given to wind power, with which the country is well supplied. A small experimental plant has been in operation at a flour mill near London, the windmill supplying sufficient power to run a small dynamo. The current is used to charge a storage battery, from which a number of arc and incandescent lamps were lighted nightly. Although the current obtained was small the experiment was successful in demonstrating the value of this form of power for generating electricity. The accumulators give out a steady current to the lamps, of course, independently of any conditions of wind and weather, and practically the obstacles which have hitherto stood in the way of running dynamos by windmills have been overcome.

The Manchester Guardian gives a summary of the English "National bread bill," which conveys a good view of the position. The annual average amounts spent by the United Kingdom on bread for the five years ending 1860 and 1891 respectively are thus contrasted:—

Money paid to	1860	1891
British and Irish farmers for wheat.	$200,000,000	$ 70,000,000
Foreign nations	85,000,000	125,000,000
Canada and Australia	10,000,000	30,000,000
India		15,000,000
Freights	10,000,000	20,000,000
English and Irish millers and merchants for manufacture, profit and railway carriage	20,000,000	25,000,000
Bakers for manufacture and profit	45,000,000	55,000,000
Cost of home baking	10,000,000	10,000,000
Total average annual cost of bread.	$380,000,000	$350,000,000

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

WEST INDIAN TRADE.

CANADIAN millers, full as much as any branch of commerce, are interested in the development of trade with the West Indies. The visit of Mr. Foster, Minister of Finance, to the tropics in 1890 should be taken as an earnest of the Canadian Government to open out these markets for our products. Mr. W. F. Halstead, himself a native Canadian, secretary Jamaica Chamber of Commerce, in a letter to the Globe under date of March 31, admits that this mission, so far as actual results are concerned, was not successful, but this success "was limited, not because of lack of effort, but simply because of his (Mr. Foster's) ignorance of the people he went amongst, and of their methods of doing business. He was in ignorance of the hindrances that were in the way of trade with Canada, and consequently could point out no way to overcome them." Mr. Brown's visit at a later date was more hopeful in its results and by means of the exhibit he made of Canadian products, the interest of the people of the Indies was aroused in Canadian affairs, and a strong disposition evinced to do business with us.

What appears to be most needed now is the adoption of such methods as will place our products readily on the West Indian markets. On this point Mr. Halstead says: "This can only be done by a reduction of freight rates from Halifax to Montreal and the upper provinces. Since the 1st of January last eight out of the ten vessels cleared from Jamaica for Canadian ports have gone in ballast, and the two remaining took but half a cargo. The consignees tell me they send no cargoes because the Halifax and Lunenburg markets are very poor, and the freight rates to markets beyond are prohibitive. Sugar is not sent to Canada because the Canadian Government does not admit as low a standard as does that of the United States.

"Having opened as wide as possible the doors to the Canadian markets, the next thing necessary is the appointment of a trade agent or representative in the West Indies, whose duties it shall be to study Canada's interests, to afford any information to Canadian firms, to advise and assist any travellers the firms may send, and to arrange for the sending of return cargoes to Canada. Or, perhaps, it might be better still to make the agent manager of a "Canadian house," to which Canadian merchants may send samples, and through which orders may be transmitted. If an increase of trade is really desired the appointment of such an agent is absolutely necessary. Local commission agents will not take the trouble to advertise and work up the sale of any new lines of goods, as it pays them better to handle articles already well known.

"A representative in the West Indies could also be of further use in acting as a sort of immigration agent. There are, I believe, hundreds of Canadians whose delicate health prevents their success in their own country who could regain their strength in the West Indies and at the same time earn a comfortable subsistence. There are always openings here for steady young men with business educations, and for those whose forte is agriculture there are thousands of acres of rich uncultivated lands that, as one writer puts it, only require scratching to produce wonderful results.

"Being a Canadian myself I am anxious to see Canada's trade in the West Indies extended, and having carefully studied the subject and taken the opinion of numerous responsible merchants I am confident that the steps I have suggested must be taken before Canada can secure a fair proportion of West Indian trade."

Mr. Halstead describes the merchants of the West Indies as being thoroughly conservative, who have been doing business in a certain way and buying in certain markets, and who will not make a change for any uncertain advantages. This condition makes it necessary for our Government and people to take hold of any negotiations in an earnest, thorough-going fashion.

NEWFOUNDLAND AFFAIRS.

Conditions, pointing to a satisfactory solution of trade difficulties with Newfoundland, have not improved during the month. On the 5th inst., after a prolonged debate in the Legislative Assembly of Newfoundland, a resolution, for a modus vivendi with Canada, was defeated by a straight party vote. Public sentiment in the island is certainly with Mr. Morine, the mover of the resolution, in his effort to reach a practical and business-like settlement of the business side of this question. The Government, however, appear to be determined in their opposition to this course; Mr. Bond, colonial secretary, going out of his way to declare that Newfoundland would prohibit the sale of bait to Canadians till the Bond-Blaine Convention was assented to. He further hinted at certain covert negotiations with the United States that would secure to the colony important commercial concessions from that country. This kind of talk is excusable on the political stump, but coming from a crown officer in his position in the House it is assuredly unstatesmanlike and entirely lacking in national dignity.

In the meantime affairs are in the hands of Mr. Bond and his friends, and even though, as intimated in the despatch from Newfoundland, the party whip itself failed to bring not a few recalcitrant ministerialists into line, and made it difficult for the Government to maintain its attitude, yet they accomplished despite these difficulties the defeat of the proposed modus vivendi. When an opportunity is given the people themselves to express their opinion on the question we need not fear either their fairness nor good sense. Their attitude is one of friendliness to this country, and as a business people they are ready and want to do business with us.

It is with the business view of the case the MILLER has to do, and it is this view that prevails evidently with the majority of Newfoundlanders. This fact makes the action of the Newfoundland Government in refusing to consider the modus vivendi, which is the present business solution of the difficulty, and alike generous to both countries, the more disappointing to all reasonable men. The diplomatic negotiations may be safely left in other hands.

What this means to the Canadian miller it is easy to see. It means no trade with Newfoundland while the present strained relations are continued. As a leading Montreal exporter has expressed it: "I do not expect to sell a dollar's worth of flour to Newfoundland this season, yet I have exported in a season as many as 27,000 barrels of flour to Newfoundland. The same quantity of American flour will go through Canada to Newfoundland in bond and all the profit be obtained by the United States."

CORN MILLING.

Corn milling, it is anticipated, will show a great increase in Kansas during the year 1892. This is the territory in which King Corn has an unquestioned ascendency. An American milling contemporary commenting on this fact counsels corn millers to give greater heed to more profitable methods of corn milling in the future. It will no longer do for the "flour miller to rig up a corn meal plant with machinery discarded from their flour mills. Corn milling is to no longer be the tail end of flour mills. Like in flour milling, those corn millers who supply the trade of the future must cater to it with the product of the best grain, cleaned and milled according to the best system known to progressive millers." Because a cheap grain, and at the same time capable of producing a good, nutritious and healthy bread, corn is almost certain to play an important part among the future breadstuffs of European countries.

NEW USE FOR CORN.

A new avenue of usefulness for Indian corn is likely to be opened up in the manufacture of an oil which is destined to supersede linseed oil. The discovery was made through the scarcity of Russian linseed oil, thus forcing soap manufacturers to look elsewhere for a supply of oil. The attention of a number of chemists was directed to the matter, and these gentlemen began a series of experiments with Indian corn with successful results. After careful examination it was found that Indian corn oil did not lose its clearness when subjected to the cold live linseed oil, and that it was far superior to linseed oil in every respect. It was further found that owing to its cheapness Indian corn oil could be profitably used in the manufacture of soft soaps and for other purposes.

TRANSPORTATION TOPICS.

An order-in-Council has been passed by the Dominion Government declaring that the regulations of last year with respect to the rebate of canal tolls on cargoes of grain for Montreal passing through the Welland shall remain in force until the end of 1892. There will accordingly be made a rebate of eighteen cents out of twenty cents per ton canal toll on wheat, Indian corn, peas, barley, rye, oats, flaxseed and buckwheat, which have been carried through the Welland Canal and the St. Lawrence canals to Montreal, or to any port east of Montreal, in all cases where said products so carried are exported, and in such cases only.

From the report of the Department of Marine, laid before Parliament this month, we learn that the total number of vessels remaining on the register books of the Dominion on December 31, 1891, including old and new vessels, sailing vessels, steamers and barges, was 7,015, measuring 1,005,475 tons, register tonnage, being an increase of twenty-four vessels and a decrease of 19,499 tons register, as compared with 1890. The number of steamers on the registry books on the same date was 1,433, with a gross tonnage of 221,679 tons. Assuming the average value to be $30 per ton, the value of the registered tonnage of Canada, on December 31 would be $30,104,250. The number of new vessels built and registered in the Dominion of Canada during the present year was 312, measuring 52,145 tons, register tonnage. Estimating the value of the new tonnage at $45 per ton, it gives a total value of $2,346,525 for new vessels. The number of tons of new vessels is included in the total register tonnage of 1,005,475, and in the total value of $30,164,250.

The Montreal Shareholder notes with pleasure that the advantages of the St. Lawrence route from the lakes to the sea over all other routes seem to be even better appreciated by our neighbours in the United States than they are by ourselves. Leading newspapers in New York and elsewhere continue to direct attention to the immense importance of the Canadian system of canals as the national outlet to the sea of the rapidly increasing traffic from the west, and urged the necessity of Government action on the subject with a view to obtaining treaty rights by the United States to the permanent use of the Canadian canals. Trade always follows the cheapest route, and Canada without doubt possesses a route from the great lakes to the ocean that must distance all competitors. The people of the United States realize this, and this fact is not likely to be lost sight of by the Canadian Government.

The Pickford & Black West Indian Steamship Co., who now run two steamers between Halifax, Bermuda and the West Indies, say that trade is steadily increasing, and that it will soon be necessary to put a new steamer on the line, the outward cargoes being so large that the present carrying facilities are not sufficient.

CONDITIONS AND PRICES.

"Dull as dish water" is the way one prominent miller answered our conundrum: How is flour? The flour market is undoubtedly on the quiet side. This remark has greater relevancy to export than home trade, though prices at home are depressed in sympathy with English advices. The Northwestern Miller expresses the export situation in these words: "Export trade is still restricted to very small limits, foreigners being slow to place much confidence in the permanency of prices. Patent is the grade mainly exported. Bakers' and low grade continue

almost wholly neglected, and so few sales are made that millers have no very well established prices. The direct exports of flour last week were 46,400 barrels, against 48,740 barrels the preceding week." Altogether it is difficult for our millers to do anything approaching a large business. It is reported from Montreal that dealers are asking their Manitoba agents to withhold shipment of orders placed until they themselves see a more certain outlet for stocks. Large quantities of American flour, it is said, are stored at Montreal waiting shipment by first boats, a consequence of the closing out of the Newfoundland trade in Canadian flour, and directing it straight into the hands of United States millers. Of conditions in Manitoba the Winnipeg Commercial says: "Millers have paid long prices for wheat, which they now hold, or have been running on for some time back, and the recent decline in wheat leaves the milling industry in an unsatisfactory position." The brand of "Our Gem," which had been selected as the standard for straight roller flour by the Board of Delegates for this purpose in October last, having been found of too high a grade as to color to meet the requirements of the market, an order-in-council has been passed rejecting that standard and substituting the brand "White Star" as the standard for straight roller from and after May 1.

PRICES OF FLOUR AND MEALS.

Quotations at the various market points are as follows:—Toronto: The Millers' Bulletin reports: "Sales straight grade at $4.05, $4.10, $4.15 and $4.25; Patents at $4.10, $4.15, $4.20, $4.24, $4.35 per barrel, f.o.b. for Lower Provinces. Small sales of extra, $3.65, and low grade, $2.60, west. Bran, $13, $13.50 and $14. Shorts, $13, $13.50, $14 and $15." Strong bakers' is the only flour that is meeting with a local sale, selling at $4.65 to $4.90; patents $4.75 to $5. The oatmeal market shows a larger supply than there is a demand, and prices declining. Standard, in jobbing lots, $4; granulated, $4 to $4.10; rolled, $4; bran, $14 to $14.50 per ton.

Montreal: Patent spring, $5 to $5.20; patent winter, $5 to $5.10; straight roller, $4.50 to $4.70; extra, $4.20 to $4.30; superfine, $3.90 to $4.05; fine, $3.30 to $3.60; strong bakers' (Man.), $4.60 to $5. Meals—The market rules very quiet, and prices are not disturbed. Granulated, in barrels, $3.95 to $4; granulated, in bags, $1.92½ to $1.95; standard, in barrels, $3.85 to $3.90; standard, in bags, $1.92½ to $1.95. Feed—The market is quiet and easy. Bran, $15 to $15.50; shorts, $16 to $16.50; moullie, $20 to $23.

Winnipeg, Man.:—Patents, $2.40; strong bakers' $2.20; second, do., $1.80 to $2.00; XXXX., $1.20 to $1.40; superfine, $1.10 to $1.15. Less than 100 pound sacks five cents extra per hundred. Millstuffs—Prices are said to be maintained more regularly; bran at $10 to $11 and shorts at $12 to $13 per ton, in small lots, to the local trade. Quotations are, of course, much lower in car lots, at mills, to ship. Ground feed—Quoted at $13 to $15 per ton, locally, in broken lots, as to quality.

DUTIES IN SWEDEN.

EVER since it convened in January, the riksdag of Sweden has been wrestling with the question of readjusting the import duties on grain and kindred articles. Sweden's demand for foreign grain is supplied largely by Russia, especially so far as rye is concerned, and consequently the Czar's ukase forbidding the export of rye was instantly felt as a disturbing factor in the Swedish grain markets, prices rising to an abnormal height greatly increasing the cost of living and causing hardship and distress among the working people. A demand for the repeal of the duties began to make itself heard and gained force as time went on. The beginning of the parliamentary session was awaited with great anxiety. The extreme free traders demanded the abolition of all grain duties. The protectionists took the ground that the present condition of the grain market was merely temporary and showed no disposition to make concessions. The Government took a middle ground and presented a bill for the temporary reduction of the duties. At last a vote has been reached, with the result that the position of the Government has been sustained in the main. The present duties are: Rye and wheat, 68c. per 100 kilograms; flour of all kinds, $1.17; potatoes, 14c. Under the modified tariff a duty of 41c. per 100 kilograms is imposed on rye and wheat for the rest of the year. The duty on corn, 68 cents, will probably not be lowered.

TRADE NOTES.

Our thanks are due the Consumers' Cordage Company (limited), of Montreal, Que., for a unique and exceedingly tasty desk calendar for this year, encased in full morocco frame. This company has a way of doing things liberally and well—always.

PERSONAL.

The MILLER had the pleasure of a talk the other day with Mr. J. H. Walker, the popular manager here for the Canadian Rubber Company, of Montreal. He had recently returned from a business trip in western Ontario, and reports a large demand at all leading points for their celebrated "Seamless Tube Hose," "Forsyth Patent Rubber Belting," and other excellent specialties that this company control and manufacture. The trade done this year is largely in excess of that for same period of former years.

CANADA'S BIG BELT.

The largest driving belt ever manufactured in Canada is that which is now almost finished and to be seen on a monster sixty inch hydraulic press (erected for the purpose) in the leather belting manufactory of Messrs. Robin & Sadler, 2520 Notre Dame Street, Montreal. This belt, when finished, will be placed in position on the driving pulley's of the Royal Electric Light Company's new engine at the establishment on Wellington Street and will transmit 800 horse-power. It is made without a rivet and is a solid mass of leather, three-ply, cemented together by a pressure of thirty tons weight from the press. Its width is fifty-three inches; length 130 feet and about an inch in thickness and of 2,000 pounds weight. The outsides of the belt are without a patch, while the whole contains 100 steer hides selected as to superiority from a collection of over 2,000. From the press the belt will be submitted to a special process, known only to this firm, whereby the surface will be made proof against oil absorption, when it will be ready for use. This firm is also manufacturing a belt forty inches wide, three-ply, for the Royal Electric Company's new 600 horse-power engine.

TO STOP THE LOTTERIES.

QUEBEC, April 12.—A deputation of the St. Jean Baptiste Society, consisting of Messrs. L. O. David, Jacques Grenier, J. D. Rolland and L. E. Beauchamp, waited upon the Government this morning and were received by Hons. Messrs. De Boucherville, Casgrain, Nantel, Flynn, Beaubien and Pelletier. They drew the attention of the Government to the fact that several lotteries have recently sprung into existence in this province notwithstanding that the only legal one was the Province of Quebec Lottery, which was authorized by Parliament, and asked that steps be taken to wipe those lotteries out of existence, with the exception of the Province of Quebec Lottery. They also asked the Government that a certain time be fixed for the existence of the provincial lottery. Hon. Mr. De Boucherville said that he was opposed to lotteries in general and would immediately put a stop to all lotteries, with the exception of the Province of Quebec lottery, but when the object for which the latter was established was attained, it would also be put out of existence. The deputation returned to Montreal this afternoon highly satisfied with the result of their interview.—Montreal Star, 12th April, 1892.

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Our Rubber Belting is Unequalled in America

PATENTEES AND MANUFACTURERS IN CANADA ... OF ...

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WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will he allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 12th of each month to insure insertion in the following issue.

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BY A STONE MILLER OF THREE YEARS' experience, in a roller mill of from fifty to two hundred barrels, where he could learn the business, with the chance of a steady position if both parties were suited. Best of references given as to ability and habits. Will go one month on trial. Address

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The President in moving the adoption of the report, February, 1891, said :—

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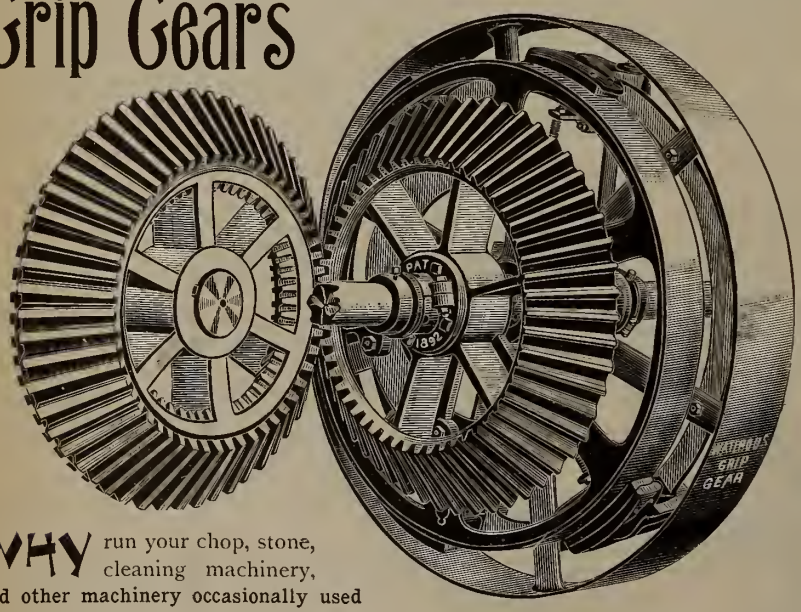
Grip Gears



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WHEN all could be cut off and on as needed instantly with our Grip Couplings, Gears Pulley?

ROLLS can be instantly stopped and started

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Brown and Cream Calendered Jute Bags

25 and 50 lb.: Flour, Rice and other Groceries. 56 and 200 lb.: Salt. 100 lb.: Flour, Meal, Grain, Potatoes. 140 lbs.: Flour, Meal, etc. 100 lbs.: Middlings. 200 and 280 lb.: Flour. 75 and 100 lb.: Bran. Wool Sack, etc.

Bleached or Gray Cotton Bags 10, 24½, 49, 98 and 140 lb.: Flour, Meal, etc. 2, 3, 5, 7, 8 and 10 lb.: Table Salt.

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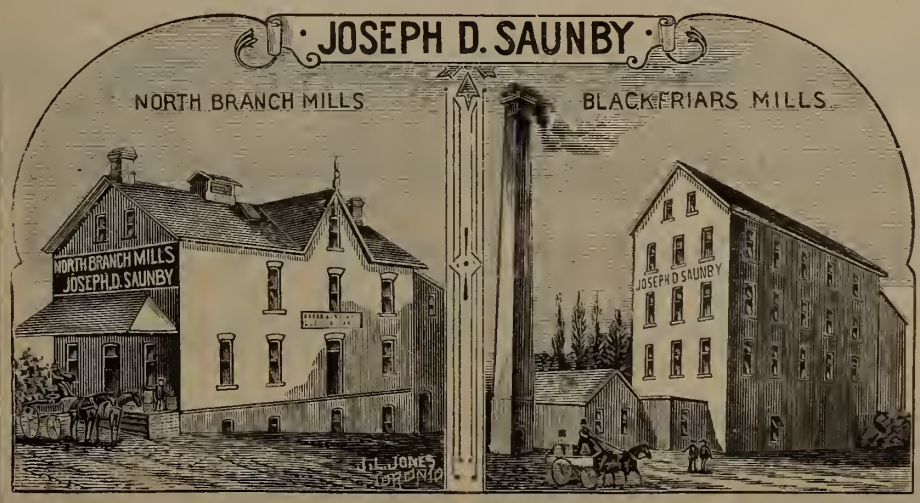

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Air and Sieve Purifier, with Dust Collector

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As a System exclusively using a separate Purifier for each grade of middlings

If you are about to Build or Remodel a Mill it will pay you to . . correspond with us . .

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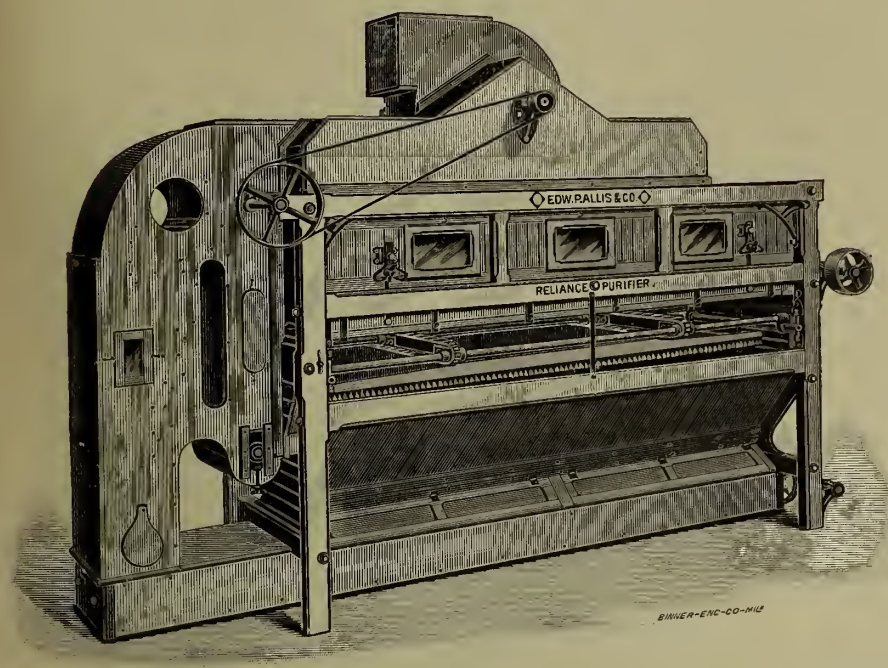

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WITH

Dust Collector

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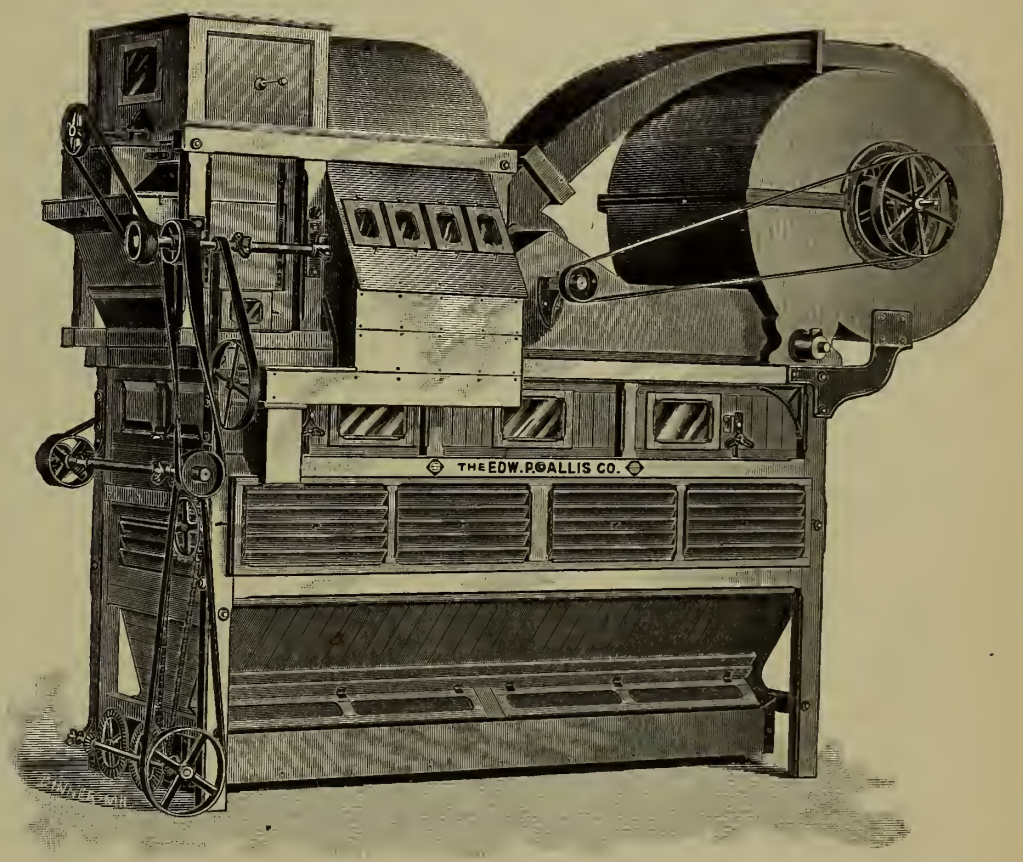

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OF LIVERPOOL

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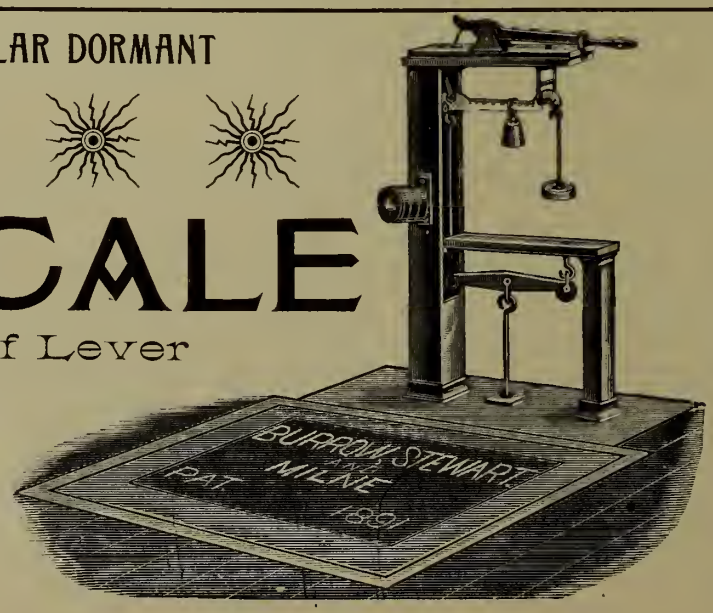

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NEW SERIES "MECHANICAL AND MILLING NEWS"

OLD SERIES, VOL. X. NEW SERIES, VOL. II. } NUMBER 5.

TORONTO, ONT., MAY, 1892

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MAGNOLIA METAL

IN USE BY EIGHT LEADING GOVERNMENTS

THE MAGNOLIA ANTI-FRICTION METAL CO., 74 Cortlandt Street, New York, N.Y. NEW YORK, N.Y., March 5, 1891.

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Yours truly, H. G. TORREY.

NOTE—Mr. Torrey is U. S. Assayer, and has been in U. S. Mint service at New York for 30 years.

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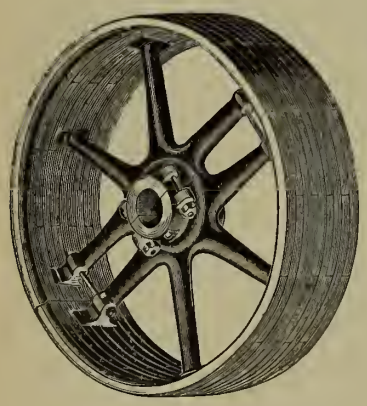

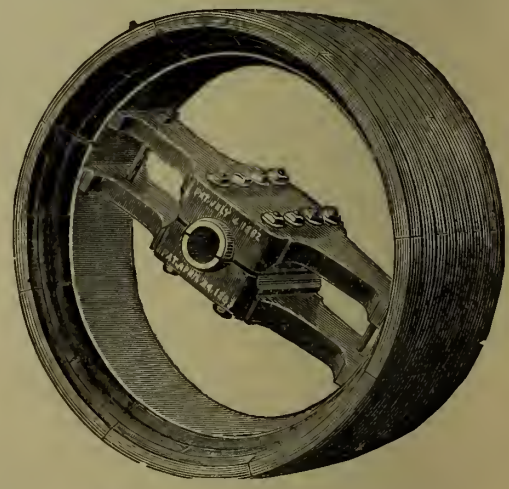

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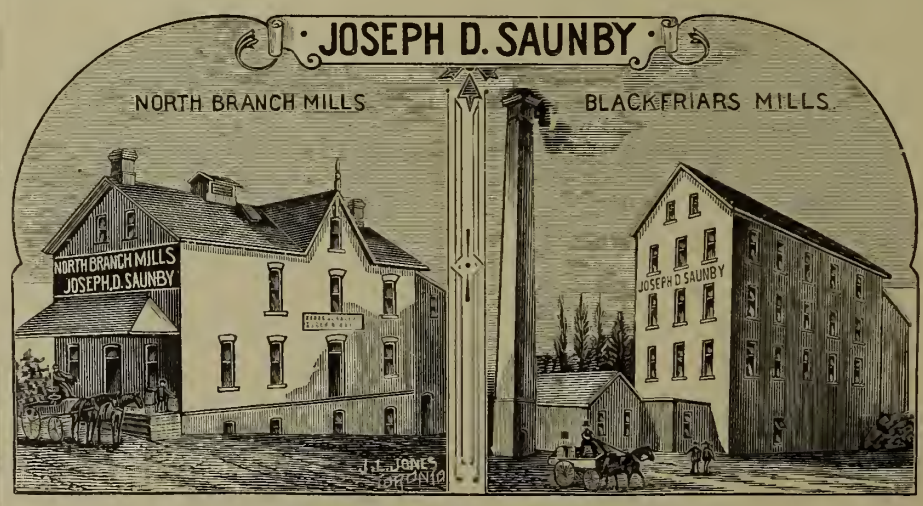

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THE CANADIAN MILLER

Old Series, Vol. X. } Number 5.
New Series, Vol. II. }

TORONTO, ONT., MAY, 1892

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CHARACTER SKETCH.

SIR WM. P. HOWLAND, C. B., K. C. M. G.

"That man is but of the lower part of the world that is not brought up to business and affairs."—Owen Feltham.

IN the catalogue of large and successful millers and grain merchants the name of William Pearce Howland, of Toronto, has held a prominent place for upwards of fifty years. Born in the town of Paulings, New York State, May 29, 1811, W. P. Howland removed to Canada in 1830, settling in the township of Toronto, Peel county, and there engaged in mercantile pursuits, opening a branch business at Stanley Mills.

In 1840 Mr. Howland entered actively into milling operations, purchasing the Lambton Mills property, today one of the best-known mills in the country, and through this long period continuously operated by W. P. Howland & Co. Besides this mill the firm are owners of, and operate, the Welland Mills, at Thorold, and still another at Waterdown. The aggregate capacity of the three mills is 700 barrels. Mr. Howland was also engaged for a time in the wholesale grocery trade in Toronto. In the commercial world, however, the name has been chiefly identified with milling, to which for years has been added an extensive grain and commission trade. As exporters of flour, and of wheat, barley, buckwheat, peas, rye and other cereals the business of W. P. Howland & Co. is one of the largest and best-known in the Dominion.

Mr. Howland's business capacity has been too conspicuous to permit of it being confined only to his own business affairs, though his success as a business man is due in a large degree to the close personal attention he has always given his own affairs. His assistance has for years been sought by our leading monetary institutions. He is a prominent member of the Board of Trade; president Ontario Bank; president Anchor and Marine Insurance Co.; president London and Canadian Loan and Agency Company; and president Confederation Life Insurance Company. In connection with this latter institution, much of the success of which is due to the wise administration of the president, we understand, when the handsome new building, corner Yonge and Richmond Streets, is completed, that a life-size portrait of "Sir William," as his fellow-directors are pleased to know him, will grace its walls.

In 1854 Mr. Howland gave signal assistance to his adopted country, the fruits of which we are reaping today, when in company with Hon. John McMurrich, Hon. Wm. McMaster and a few others, the first attempt to open up trade with the Northwest was undertaken, and Captain Kennedy was provided with funds to go to that country and buy its products.

In the case of one having the thorough knowledge of affairs possessed by Mr. Howland, it was to be expected that his fellow-citizens would be desirous of seeing him placed in a position where his wide experience and talents might be of service to his country. From 1857 to 1868 he represented West York in the Canadian Assembly, and, after the union of the provinces, as member of the House of Commons. He was a member of the Executive Council of Canada from May 24, 1862, until March 29, 1864, and again from November 24, 1864, until the period of the union. July 1, 1867, he was sworn in as privy councillor and became Minister of Inland Revenue. He also held at other times the position of Receiver-General and afterwards of Minister of Finance. In 1865, along with Sir Alex. Galt, he visited Washington in the interests of reciprocal trade with the United States. He was a representative to the London Conference in 1866-67 when terms were completed for the union of the British provinces. From 1868 to 1873 he was Lieutenant Governor of Ontario. In July, 1867, he received the title of C.B., and in May, 1879, Her Majesty conferred on him the honor of knighthood.

To the people of Canada, who know Mr. Howland well, it is unnecessary to indicate the ability he has shown under all conditions and in the many places of honor and responsibility he has occupied. Duties and responsibilities crowded upon him with wonderful rapidity for many years, but he always rose equal to the occasion. If the question were asked, "how could one man accomplish so many things and do all so well?" the reply might fittingly be made in the words of that other great statesman, Charles James Fox: "Because I am a very painstaking man"—doing one thing at a time, neglecting nothing. The milling and grain industries of Canada are honored in the distinguished career of Sir Wm. P. Howland, C.B., K.C.M.G.

Mr. Howland's American progenitor, John Howard, was a Quaker, who emigrated to the "bleak New England shores" in 1620. His father was engaged in farming in New York State for a number of years and afterwards embarked in business. He died at Cape Vincent, N.Y., in 1842, the mother in Toronto some years later. Associated with Mr. Howland in the business of W. P. Howland & Co., are his son, Mr. W. H. Howland, ex-Mayor of Toronto, and Mr. L. A. Tilley, son of Sir Leonard Tilley, Lieut.-Governor of New Brunswick, and late Finance Minister of the Dominion.

Sir W. P. Howland.

LINING UP AN ENGINE.

THE easiest way to determine whether an engine shaft is out of line depends considerably on the style of the engine, as with some engines it can be done quite easily and by simple means, while in others more inconvenience and greater difficulties are experienced in lining, says the Stationary Engineer. As a stationary engine is attached solidly to the foundation, it may be leveled and squared. With the frame of the engine level, a level placed across the guides should show these to be level also, then a plumb line dropped in the path of the crank, so that the line will come at the centre of the length of crank pin when the pin is above the shaft, and again when it is moved to the lower part of its travel, will show that the shaft is level. This point might also be determined by the use of a level, if enough of the shaft is exposed to accommodate the length of the level. To determine whether the shaft is in line on a horizontal plane, run a line parallel with the guides and determine whether the crank pin strikes the line at the same point when near both the outward and the inner points. If the leveling and establishing of the line are carefully done, the engine can be placed exactly in line, or a trial in this way will show how much it is out of line.

To thoroughly line up an engine and get all parts in their proper position, the piston, crosshead and connecting rod must be removed and a line drawn through the cylinder and projected beyond the outer point reached by the crank pin in its travel. This line must be centered accurately in the cylinder, measurements being made at both ends and the work carefully done, so that the line is at equal distance from the sides. A very trifling variation in the distance of the line from the sides at either end of the cylinder will be multiplied at the crank end. The line can be fastened in any convenient manner at the crank end, but at sufficient distance beyond, so as not to interfere with the movement of the crank. With the line in position, the guides should be carefully adjusted and the adjustment made accurate, as must all other adjustments and measurements when lining up the engine, or best results cannot be obtained.

A good and careful workman can show his qualities to good advantage in this kind of work, for here a variation of half a hundredth of an inch may be "good enough" to suit some, but the line should be drawn closer than this. With the cylinder and crosshead in line, the next thing is to line the shaft. This can be done by removing the shaft from the bearings, replacing the caps of the journal boxes and running a line through them, and then testing with a square and plumb line or level, adjust the bearings, so that the shaft will come in line. If the shaft bearings are badly worn we should prefer to line the shaft while in position. This can be done by blocking the shaft so it is level with the center line of the engine, and placing it also at an angle of 90°, as shown by the square, to the center line of the engine. The height of the shaft can be obtained by leveling from the center line to center of the shaft. If it is necessary to re-babbitt the bearings, the old babbitt should be removed from the boxes before the shaft is placed in position; then, when accurately in line, re-babbitt the boxes in the usual way.

ABOUT SPOUTING.

THE spouting in a flour mill is something that requires tact, judgment and skill all combined, and he who is able to put up spouting rapidly and correctly is counted among the most efficient and valuable millwrights on mill building jobs. The connections are so various and complicated as to demand special skill, and judgment must be exercised in determining the pitch necessary for the various kinds of material. Soft material, such as flour, chop-flour returns, bran and the like, require sharp inclines to travel on freely, while wheat and purified middlings will run freely on comparatively flat surfaces. Twenty-two and a half degrees is abundant for wheat, corn, or other hard grains, and from thirty-five to forty degrees for middlings, to make it always sure. Other kinds of grain and materials will come somewhere between these extremes. It should, however, be remembered that it is always best to err on the safe side; much better to have a spout too "steep" than too flat, no matter what the material may be that is to be spouted. It is an excellent plan, where there is any doubt about the matter, to try the material on a flat board, set at such angle as will allow it to run freely, and then put up the spout accordingly, being sure to have no less angle, rather a greater angle than the trial board had. Such precautions will prevent much after trouble by choking, etc.

NOTES AND NEWS.

Clark & Manning, millers, Balmoral, Man., offer to sell out.

The Franklin (Ind.) Milling Co., capital stock $100,000, was placed in the hands of a receiver April 28.

A stock of 4,000,000 bus. of Manitoba wheat held in that country is not a cheering outlook for local grain men. Much of it has seriously shrunk in value.

A Montreal dispatch says: It is announced that the Canadian Pacific railway has resumed acceptance of grain in bulk consigned to Montreal for storage, it being presumed that before any large quantity of grain can possibly arrive here they will be able to relieve the elevators.

President Harrison has prepared a message to Congress calling attention to the tolls imposed by the Canadian Government upon American vessels using the Welland and St. Lawrence canals, and suggesting the propriety of legislation imposing similar tolls on Canadian vessels using the Sault Ste. Marie canal.

Good reports have been received from Russia regarding the prospects of winter wheat and the sowing of spring crops. A fine harvest is promised in the Caucasus. The work of building a huge grain elevator at Novorossisk on the Black Sea, which was suspended owing to the cold weather, has been resumed.

Don't flatter yourself for a minute that you are smart enough to make a "cheap John" roller mill do as good work as a first-class roller mill, or an old hexagonal reel bolt as good as a late style model reel, an old-fashioned slide-valve engine work as well as a corliss, or a ramshackle furnace act as economical as the modern furnace with the latest improved grate-bars. You can't do it.

Official reports upon the condition of the Hungarian crops state that the snow has melted in all but the mountaneous districts. The autumn sowings look sickly in many places, and will have to be replaced by spring grain. The barley and rape seed sown last year have suffered considerably. Spring agricultural work has terminated in almost all directions and the seed is germinating well.

The Chicago grain fleet coming down the St. Clair river embraces fully 100 vessels, bringing 6,000,000 bushels of grain, more than half of it wheat. The world has never seen such a fleet before. Some of these vessels cost over $250,000 apiece, and several bring over 100,000 bushel of grain each, in spite of the low water. A Duluth fleet is carrying 3,000,000 bushels of grain and nearly all bound to Buffalo.

The announcement has been made that the following rates will apply on grain in car loads of 30,000 pounds or over to Montreal for export, inclusive of terminals: From stations north and west, 14 cents per 100 lbs.; from stations west to Stratford, London and St. Thomas, 12½ cents; from stations Toronto and east, including the Midland division under tariff, is less 10 cents. The grain will be forwarded to Montreal at published tariff rates and reduced by rebate upon proof of exportation.

A terrific explosion, by which one man lost his life and another one is seriously injured, took place in the flour mill at Elmwood, Ont., on the morning of the 10th inst. The boiler burst, instantly killing Mr. Alex. Heller, the lessee of the mill, and inflicting serious injuries on his assistant, Mr. H. R. Clements. The engine-room is completely demolished, and the mill is badly wrecked. Parts of the boiler, weighing about four hundred pounds, were carried into a field one hundred yards distant from the scene of the accident. The boiler flues are lying in all directions.

The Pilot Mound Sentinel says: "Southern Manitoba at present presents the most singular appearance ever shown by any country at this season of the year. There are thousands of grain stacks still standing and thousands of acres still covered by stooks, that have been on the field since last harvest. Some of these will be stacked and some be burned to clear the ground for another crop. There is at present no market whatever for grain, and much of that threshed during the winter and stored in farmers' grainaries is in danger of heating and will be a total loss.

An American contemporary tells of a bright young man employed in a boiler room of a New York concern who, in the absence of the engineer, opened the draughts, heaped on the coal and fastened down the safety valves. Luckily, a boiler inspector happened to be passing and heard the rumbling of the imprisoned steam. He rushed in, drew the fires, let off the imprisoned steam and promptly arrested the bright young man. The latter said that he did not intend to blow up the building, but "only wanted to see the boilers shake." There is no moral to this story except that "inspection does not inspect," unless it inspects the mental capacity of those who are to be in attendance about boilers. A boiler-room or machinery floor is no place for a low-grade idiot. How is it in Canada?

Samples of bread made from Ladoga wheat were on exhibition on 'Change on the 11th inst. This wheat, as our readers know, has been severely condemned in some quarters, its milling qualities being considered poor. Acting under instructions, McLaughlin & Moore, of this city, ground samples and made tests as to the quality of flour made from this wheat; also from No. 1 hard. The bread from Ladoga was of good color and very little apparent difference was noticeable when compared with the best hard wheat flour. The test was certainly not unfavorable to Ladoga, though we understand that several city bakers have condemned Ladoga wheat flour.

A correspondent of the Liverpool Corn Trade News writing from Budapest, says: "Stocks of medium grades of flour are accumulating heavily, and I venture to say that during the last five years the sales of these sorts has not been so slow as it is now. The principal cause of this is that the new system of types widened the difference of quality and diminished the difference of price between the finer and lower sorts, so that everybody prefers to buy the higher sorts, which are cheap compared to the price of the medium and lower grades. Thus it is that stocks of top grade zeros are almost exhausted, and the scarcity of this sort is felt the more intensely as all our mills have to forward this month larger lots of top grade to fill former contracts with France, made on the basis of the actual duty, which will be raised considerably by the end of May. In spite of this, the bad home trade and the entire absence of demand from the United Kingdom, render the situation of our mills very unsatisfactory, and most of them are working half-power or less."

The Elevator and Grain Trade, of Chicago, has the following to say regarding the discussion which took place in the Manitoba Legislature, on the dockage of grain: "In Manitoba it has been proposed to regulate dockage of grain by law, and recently a resolution was introduced in the Manitoba Legislature to the effect that some provision should be made whereby a uniform and equitable system should be established for dockage. The wise legislators should first enact a law prohibiting the marketing by farmers of grain containing more than two pounds of dirt to the bushel, and then they can, with good grace, limit by law the amount of dockage. The cause of dockage is dirt, so to regulate dockage and make it uniform in all places it will be necessary to regulate the amount of dirt the farmer leaves in his grain. The government which undertakes this is, indeed, undertaking a difficult task. It might as well try to compel all farmers to market grain of like quality or to compel all dealers to pay the same price for grain. When the farmer is not satisfied with the amount of the dockage the grain should be cleaned at his expense and the dirt returned to him. Few farmers will ask more than once to have their grain cleaned."

It is said that there is a considerable quantity of wheat in the Prince Albert district which cannot find a market. The Hudson Bay Co. have a flour mill at Prince Albert, part roller and stone process, but nevertheless flour is brought into Prince Albert from outside points. A committee of the Prince Albert Board of Trade recently conferred with Messrs. Beaston and G. S. Davison, of the Hudson Bay Co., and called their attention to the considerable amount of wheat in the country which could not find a market. They offered, on behalf of the merchants, to purchase from the company at wholesale rates all the flour that was ground, so as to exclude as much as possible imported flour of the same grade. The company would not undertake to purchase all the wheat in the country, but agreed to give flour in exchange for wheat to the merchants on a cash basis. The price for No. 1 hard wheat was proposed at 60c. and of strong baker flour $2.50 per hundred. The Prince Albert representatives of the Hudson Bay Co. agreed to recommend to the chief commissioner at Winnipeg the most favorable consideration of the wheat situation with a view of having the whole crop of the district ground or purchased at Prince Albert. The opinion was expressed that there was probably not more wheat in the district than will be required to supply the local demand until the next crop should be harvested, if it were used instead of bringing in flour from Manitoba mills.

TRADE NOTE.

Nothing in connection with machinery is of so much importance as good metal for its frictional parts. Trying to be economical in this respect can only be accomplished by using the best metal you can get; and we say every man to his trade. Not every man can make Babbitt. The trouble with Babbitt is it cannot be made twice alike. You would not take your watch to a blacksmith for repairs, though a good man in his way. Mr. Alonzo W. Spooner, of Port Hope, makes a reliable metal for all such purposes. People may advertise and say all they like against his metal (copperine) but we know it is doing the best and hardest work in Canada, and that it is gaining in favor every year. We admire his saying that it is Canadian made and stumps the world. There is no bark on his talk.

MAGNETIC SEPARATION IN FLOUR MILLS.

BUT few, compared with the whole number of flour millers, says the Mechanical News, seem to place a fair appreciation upon the importance of the magnetic separator in magnetic separation, as there are various devices for the purpose, some of which may be called separators, and others scarcely deserving the title. It will probably astonish any man who has never made the experiment to find the quantity of all kinds of bits of iron that a magnet will separate from the wheat in its passage from the cleaners to the rolls or burrs, in an apparently perfectly clean condition. The naked eye cannot discover the iron, but the magnet finds it readily. A very common way of doing it is to arrange a number of horseshoe magnets in a movable section of the lid of the wheat spout leading from the scourers to the stock hopper in such a way that the stream of wheat will pass among or through them freely. The bits of iron that may be among it, and there are sure to be some, are quickly attracted and adhere to the magnets until loaded, when they are removed, cleaned off and replaced for service. There are also automatic machines made for the purpose, which are still more useful. The baneful effect of grinding iron with the wheat, while more or less injurious to the rolls or burrs, is almost severely felt in its action on the bolting silk, which is sure to be permanently injured, to a greater or less extent, every time bits of iron are admitted to the reels, and just as sure to be ruined if the practice is long continued.

CHARACTER OF INDIAN WHEATS.

OF Indian wheats, says Milling, a British trade journal, White Bombay takes the highest place, both in price and quality. The grade known as Choice is exceptionally fine wheat, its impurities are few and its all round qualities many, although the structure of its grains may be called "flinty" on its arrival here. When it is carefully prepared it goes to the mill soft enough and yields a higher percentage of flour than any other white wheat except Australian. The flour is splendid in color and bloom and moderate in strength, absorbing well but wanting in retaining power, and having more flavor than either Californian or Chilian. No. 1 Bombay is a similar wheat but with a higher percentage of impurities, and consequently taking more cleaning. When this cleaning is properly done, the flour, though less in quantity, is about equal in quality to that made from Choice. Of late years Bombay wheats have rapidly advanced in favor, especially in Lancashire and West Yorkshire, many of the largest and most successful millers using them very freely in their mixtures in place of Californians, etc. For adding color to strong reds they are perhaps the most useful wheats on our markets, their dry starch, and somewhat inelastic pale gluten, combining admirably with the dark tough gluten and grey starch of Azimas and Ghirkas, and even when judiciously mixed with fine Duluth they add to, rather than detract from, the high qualities of that wheat.

FLOUR MILLS IN URUGUAY.

A GERMAN consular report from Uruguay gives a glowing account of the milling industry in that South American Republic. Montevideo, the capital, which lies on the opposite bank of the Amazon to Buenos Ayres, possesses 13 steam flour mills, with a combined annual capacity of 1,200,000 hectolitres. The mechanical equipments of the mills, including the roller mills, which are chiefly on the Ganz system, is furnished by Austro-Hungarian firms, while the silks come from France, Italy and Switzerland. The report adds that Uruguay is in a position not only to meet its own requirements in respect of flour, but to compete with the United States mills in the Brazilian markets.

WHAT HE MUST BE.

THE manufacturer must be a man skilled not only in his trade, but with a knowledge of material and a capacity to handle those peculiar forces of nature that we call our hands, with ability; to buy in the cheapest market; with capacity to so figure his cost that he knows exactly what there is of waste and what each item put together amounts to; be able to furnish to the trade and the market the most ingenious contrivance, the best possible article for the least money.

VIEWS AND INTERVIEWS.

Large-sized Loaves.

One of the charms of history is the study of the habits and customs of living among the various peoples of the earth. In the simple matter of the size of a loaf of bread the following account of the bread baked in France and Italy is altogether interesting. In the case of the "pipe bread" of Italy the loaves are between two and three feet in length, and occasionally even longer; while the French people make their loaves in the shape of very long rolls of bread ranging from four to five feet, and in a few instances even six feet in length. Bread in Paris is distributed almost exclusively by women. They go to the various bakehouses at 5.30 a.m. and spend about an hour in brushing the long loaves with special brushes. When her load is cleaned of grit and dust, the "porteuse de pain" goes round to the customers. Customers who live in flats have their loaves propped up against the door of their apartment. Shopkeepers, restaurateurs and other customers, who have entrances to their premises on the street, find their portion of the staff of life leaning against their front door when they take down their shutters. The wages of these bread carriers vary from 48 to 58 cents a day, their work being generally over at ten or eleven o'clock in the morning.

Bonusing Mills.

It is not likely that we shall ever get men to view the question of bonusing as with one eye. No language, in the opinion of some, is too strong to condemn the system, whilst others can see no reason why, under any circumstances, bonuses should not be granted when municipalities are agreeable and bonus hunters are satisfied with what is offered them. It is likely that the sensible opinion is to be found in a medium view. Millers as much as anyone engage in the business of bonusing, and very often with as decided advantage to the municipality as the miller. Yet with millers, as with others, common-sense must be exercised by all concerned. "The man who builds a mill," says one writer, "where his only inducement is a bonus is taking a great risk, and the people who pay the bonus are in the same fix. This rule applies more particularly in such cases as those where a miller is induced to construct and operate a mill where none had been before, and where prospects are so dim that the enterprise is looked upon as a venture. The man who gets a bonus for building a mill alongside others that are paying has a "snap," and the people are supposed to pay for it because they can afford to. Thus, it is patent that people can afford to pay for a sure thing, but not for a venture, except in rare cases, and so it is with men who accept bonuses. Now and then they prove to be good enterprises, but generally the odds are against both those who offer and they who accept bonuses."

A Boy Inventor.

Humphrey Potter is probably the only boy who ever invented anything of practical use to the world. Before Watt had perfected his discovery the Newcomen engine was considered the best. Besides a man, it required the services of a boy to turn alternately the two cocks, one admitting the steam into the cylinder, the other admitting the jet of cold water to condense it. This work was easy enough, but it soon grew monotonous, as it had to be constantly attended to. Potter was lazy, and he thought how much time he would have for play if he could only make the cocks turn themselves. He observed the alternate ascent and descent of the beam above his head, and being a bright boy he thought he could save himself much work by applying the movement to the alternate rising and lowering of the levers which governed the cocks. He contrived a device, which he called the "scoggan" (meaning lazy boy), consisting of a catch worked by strings from the beam of the engine. While the arrangement was of course very rude, it not only answered the purpose and made the engine automatic, but improved the working power by increasing the number of strokes from six to fifteen in the minute. Henry Beighton, who added the plug rod and hand gear, subsequently improved upon the boy's work by doing away with the catches and strings and substituting a rod suspended from the beam, which alternately opened and shut the tapets attached to the steam and injection cocks.

Ups and Downs.

In all branches of trade the tendency of the individual is to become despondent and growl. An occasional boom may at times carry men up into the seventh heavens, but usually they do not stay there long. When doing well we are prone to think that we should be doing better, and too often we do not let well enough alone. When business is dull, in our own imagination, it is "awful" dull. In neither case, as a rule, are the conditions as high up or low down as we place them. The writer rather likes the way matters are stated in the following, which has a specific application to the milling business. Says a brother editor: "Millers who complain of dull trade should think seriously on the cause. They may think it is one thing but find that it is something else if they probe deep enough. It is no use to complain if one stops at that. If something is not gained by complaint it were better not made, for the "down-in-the-mouth" grumblings of one man has oftentimes deterred others from doing a good work the grumbler failed to accomplish. When you hear a miller say that "times are so hard" that he can not make money, and his neighbor goes right along gaining gold by making flour, you are licensed in believing that the one who complains either does not understand the business he is engaged in or does not properly attend to it; neither of which reasons is he willing to admit as having a bearing on his case. The fact is, nevertheless, millers who know what they are about, and are industrious as well, make money and get rich. All millers do not so succeed for the same reason that all merchants do not. The followers of any of the trades do not all get to the last round on the ladder of fame and fortune, only those who are alert and well versed in their calling so prosper. But it will be found, if inquired into, that proportionately to the whole number who engage in the business, millers succeed in greater numbers than do merchants or manufacturers, or even professional men; showing that milling is really a good business—a paying business—for those who understand it and pay strict attention to it."

Theory vs. Knowledge.

A few months ago we made some comments on an article by Erastus Wiman on "The Flour of the Future." The article has met with no small share of criticism from both the lay and milling press. In some lay circles we have noticed that it has "caught" the laymen, but with those who have a practical knowledge of the subject the opinions expressed have dropped a good many points. In another part of the MILLER we publish an article entitled, "The Staff of Life," from the English Miller, which is not a review of anything Mr. Wiman has said, but is on similar lines, reviewing Mr. John Goodfellow's new book, "The Dietetic Value of Bread." The current number of the Modern Miller handles Mr. Wiman in this manner. Mr. Wiman's criticisms of present milling methods was in these words: "The demand has been made for white bread and the millers have complied. Mechanical skill has come to their assistance, and every part of the wheat which would tend to darken the flour is being removed with a precision and thoroughness which are simply wonderful." "Not only wonderful," replies our contemporary, "but truly scientific. And this has been done not in order to comply with fashion, but partly as a result of the growing demand for pure food, and partly under the operation of economic requirements. It has been found more economical by feeding the bran and germ to live-stock to thus make of them fine flesh for our tables and rich manure for our fields, than to put them directly into human stomachs incapable of thoroughly assimilating them. Fashion has had nothing to do with bringing white bread into favor, unless the growing demand for pure food be called fashion. We demand white flour and white sugar because we know that white flour and white sugar are usually pure. What if white flour be principally starch, and deficient in nitrogen and phosphates? Man does not live by bread alone, but by a hundred articles from which every need of his body is supplied. It is this variety that gives spice to our breakfast and grace to our dinner; nor can we conceive of a time even measurably distant when man will hail as a glorious thing the fact that a grain of wheat is an epitome of the human body and be willing to make that cereal his sole article of diet." In marked contrast to these ideas is the paper of Prof. W. O. Atwater on 'The Food of the Future,' contributed to the Century Magazine, and a resume of which we gave in these columns at the time. This is a scientific exposition of the writer's belief that the capacity of the earth for yielding food is almost unlimited. Better economy, increased fish culture, improved tillage, and irrigation, he says, will enable man to maintain for generations to come a supply quite equal to his needs.

SENSIBLE ADVICE.

THE following sensible advice is given by a writer in a milling exchange: "You should have a careful inventory of your machinery taken by disinterested parties, including the number and size of pulleys, size of shafting, belting and everything liable to burn. Preserve this carefully; then in case of fire you have proof of your loss. I have seen many a man lose thousands of dollars through this neglect, and I say to you as a friend that you should attend to this matter at once. No miller can afford to run any risk in this matter of insurance. It is bad enough to suffer loss by fire, but it seems worse not to be able to get half what you ought to receive after your mill has burned." A curious calamity befell a miller in England some time ago. His place was destroyed by fire, the mill was six miles away from any town, so it was cleaned out before help arrived. Early in the morning of the day after the fire the chief agent of the insurance company called, and with a neighbouring miller examined the ruins. The estimate made of loss was so far wrong in the miller's judgment, that after a prolonged discussion between the agent, the neighbor and the sufferer, it was agreed to leave the amount of the loss to be decided by a very experienced miller, and an agreement was executed to that effect. Unluckily, the practical man so fixed upon was a large stockholder in the insurance company interested! We need hardly tell the result—by a too hasty expression of confidence in one of the same trade he was hopelessly ruined.

STRENGTH OF FLOUR.

A WRITER, who is quoted as an authority, says in the Bakers' Record: "We have been sadly indefinite in our ideas concerning 'strength' of flour. Personally I go with Prof. Graham, whose opinion is that 'strength is proportionate to the percentage of insoluable nitrogenous or albuminoid substance.' I find actual experience entirely supports this view; wheat containing most insoluble gluten does produce the greatest weight of bread from a given quantity of flour, and that, too, of the largest volume." This latter is the crucial point. Assume you washed out two flours, A and B, and from same weight obtain a higher percentage of gluten from A than from B, does it prove A to be the best in "strength?" No. For the rising of the loaf does not depend upon the crude but on the insoluble gluten, for this it is which, by entangling the carbonic acid gas and steam in the oven, forces up the loaf, and makes the difference between strong and weak flours. Now it does not perhaps follow that power to lift the loaf and power to absorb water mean necessarily the same thing; but unquestionably they go in company, and are found in wheat only of the highest maturity. Would it appear from the above that the old-fashioned way of doughing up flour and testing its elasticity is a reliable method of proving the baking value of flour, and would the washing out of gluten to ascertain the quantity be any guide to the baking value of the bread? These are questions we should by all means have settled once and forever, clearly and unmistakably. Flours from English wheats are usually soft and damp; they vary considerably with change of climate and locality; the proportion of gluten is low and devoid of much elasticity; the water-absorbing power is low. Scotch flours are even moister and softer than those from English wheats. Like them, they are low in gluten and water-absorbing capacity. The loaf is small, bread moist, and flavor pleasant. Indian flours generally are hard flours of a ricy character; their gluten is low in amount, and usually very deficient in elasticity; the quantity of water absorbed is high; the color is low, except with very great milling precautions. The loaf is small and runny, devoid of texture, and "foxy"; the bread is harsh and beany in flavor.

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

BUCKET SHOP METHODS.

WE are not supposed to do things in Canada in just the same fashion that they are done in Chicago, though the recent break, coupled unfortunately with his escape, of broker A. G. Brown, shows that we occasionally grow a man in this country who can do up his clients, not omitting the shrewdest of bankers and brokers, in a style creditable to the cleverest members of the Chicago Exchange.

Nor have we always been far behind in our bucket shop experience. The evil, it is pleasant to record, does not exist in as aggravated shape as it did a few years ago, thanks to wise and healthful legislation, backed up by officers who were determined to see this law enforced. It is hardly fair to claim, however, that the evil has yet been entirely removed, if the repeated charges of a daily contemporary against a certain institution in this city are to be credited.

The methods employed by the bucket shops of Chicago have recently been exposed by the Tribune of that city, and according to this account the game of wheat speculation carried on there would make "three card monte," "bucking the tiger," and all other "flim flam" and "brace" games, seem respectable and fairly remunerative sorts of amusement.

It is brought to light in this way that the "bucket shop" operators, in order to thoroughly fleece their customers, employ the night preceding the day's business in making up the market quotations for "suckers" to nibble at. In fact it seems that whatever evidence of trading "bucket shop" business formerly had has been abolished and the business reduced to a systematic and ingenious kind of robbery. In the particular instance paid attention to by the Tribune the robber employed two young men to make up his market quotations in advance. This is how they "operated" it:

"Every night the two men referred to retire to a quiet room provided with a roll of ticker paper and a typewriter. On the paper one of them writes a long series of figures and fractions opposite the names of those stocks whose names are on the public stock exchange blackboard. The figures range in the case of each "stock" from about 77 to 73. Those are the high and low points, and the distance spanned is broken by various other "quotations." The operators by this means aim to interest their customers and provide for themselves the wherewithal to run their business. They never let the "quotations" run in one direction, as they persist often in doing in the real markets. They make them of that varied kind which first warms a player with hope of profit and then dashes him into gloom with loss staring him blandly in the face. This process is repeated over and over until the disgusted player closes his "deal," glad to escape with a small loss. It is this discouragement on the part of the gamblers that swells the profits of every bucket shop."

An examination of the bogus ticker showed that it corresponded with a genuine machine with the exception that it had no connection with any outside wires' The tape printed on typewriters many hours before was run off by means of a dynamo which was found in the base of the ticker cabinet.

The legitimate grain merchant in every country is interested in seeing an end put to these dishonest methods of speculation in wheat. The average citizen in his ignorance of real conditions confuses the methods of the respectable and honest grain man with those of the "bucket shop" gang; whereas they are as remote as the transactions of a chartered bank compared with the rogue who handles "green goods."

THE BEST REMEDY.

A GENERAL discussion is taking place thoughout the country regarding smut in wheat. This will do good even though the remedies suggested may be as numerous as the recipes offered Mark Twain on "How to cure a cold." It is to be expected that the larger share of attention is being given to this subject by the farmers of the Northwest. The Winnipeg grain exchange has recommended a certain treatment for smut which is meeting with some criticism on the ground of being a tedious process, especially in the busy spring season, when time is money. Mr. S. A. Bedford, of the Brandon Experimental farm, has given out the following remedy, which has the recommendation of simplicity: "Take ten bushels of wheat and spread it in a tight waggon box and treat it with a patent pail of liquid prepared as follows: Dissolve one pound of bluestone in two quarts of boiling water, put it in the pail and fill the pail with cold water. Then sprinkle this liquid over the grain with a bunch of straw or a whisk, taking care to turn the grain so that the liquid is applied to every kernel. (On the farm here I always have two men working at it, one to turn the grain while the other applies the liquid.) When the grain is very smutty the liquid should be made stronger by dissolving double the quantity of bluestone in the water."

Mr. Bedford prefaces his recipe with the remark: "I don't believe in sowing smutty grain at all, and even if there is no appearance of smut it can easily be detected by the smell." This does seem the wise course for the farmer to pursue. The farmer can no more afford to handle grains of a poor quality than the grocer can sell inferior teas or the manufacturer turn out scamped work. The chickens come home to roost every time.

The suggestion that smut in wheat should be made a question of legislation is not devoid of favorable points, the most important of which is that the prevalence of smut is an injury to the whole country and may be perpetuated, and for this reason should be treated after the fashion that we treat noxious weeds. It is seriously to be doubted, however, whether legislation could be framed that would successfully remove the evil. A weed is only a weed; wheat is wheat, even though it is smutty wheat. In matters where self interest comes directly into play, as it does in the case of any farmer who sows smutty wheat, working square to his own detriment, the widest experience shows that common-sense will usually come to the top. When there is a choice between the good and the bad, the better article is very sure to form the choice. The farmers of this country certainly have ample choice of wheats that are not smutty. Mr. Bedford's advice, like that of Punch, seems the wiser: "Don't."

BROADENING THE MILLER'S VIEW.

IT is not a new question: "Why should not the bulk of wheat exported from this country go out as flour instead of wheat?" The Millers' Review, discussing the question, points out that in years past this was the case. Flouring facilities then were nothing to brag of when compared with the improvements of the present day, but we did then what is not done now. Our contemporary does not pretend to answer its own enquiry, but it suggests that the question is a practical one for millers' associations to discuss. What a revolution of the kind would mean to the milling trades one can readily understand. "Just think," says the Review, "what the effect would have been on the industry if, say, four-fifths of the great body of wheat exported during the last half of the past year had gone out as flour. Every mill in the country would have been humming, the large merchant mills in filling export orders and the small country mills in filling domestic orders, now largely filled by the merchant mills."

At the meeting of the Dominion Millers' Association in March, the suggestion was made by Mr. Spink that certain members of the association be appointed to prepare papers on practical milling subjects to be read at the next general meeting. Here is a subject that might be taken up by some one. To be intelligently handled it would necessitate a careful study of the conditions of flour milling in this country and Europe for probably a century back. The man who would undertake the task would enrich himself, in the research necessary, to an inestimable extent, and the information thus gleaned and the deductions and conclusions that he would be led to draw from the data before him would prove a valuable contribution to the literature of milling.

The primary object of an organization like the Dominion Millers' Association is business. Men with mutual interests band themselves together in this manner that unitedly they may the better conserve their interests. The suggestion of Mr. Spink could in no way lessen the strength of this first purpose. Its influence is rather to give breadth to the plan, inasmuch that according as the view of the miller is broadened the more clearly and intelligently will he see how and where he can widen and enlarge his interests. Mr. Spink evidently had this thought in his mind when he spoke of the plan as a source of education in milling, and that this education ought to be a part of the work of the Millers' Association.

The weakness of human nature, in pursuing, as we all must, some one particular calling, is in getting into a rut and sticking there; travelling constantly, as some one has said, around our own cabbage leaf we conclude that its circumference is the circumference of the world.

A variety of papers from different men, discussing questions of milling from various standpoints, could not but enlarge the view and quicken and sharpen the intellect of every man who would be a hearer or participant in these exercises. Other business at the millers' meeting in March prevented the suggestion of Mr. Spink from being followed up and taking formative shape, but it is quite within the province of the executive to put the plan into operation. Increased interest would certainly be given to the July convention in having a programme of this character announced.

"PLUNGER" PARTRIDGE.

TIME was, and that less than a year ago, when the real condition of the wheat market of Chicago was not known until some idea had been gleaned of the possible intentions of that wily manipulator, B. P. Hutchinson. But the day came when his star was no longer in the ascendant, and, as has been remarked, "Old Hutch" became a back number.

Within recent months interest commenced to gather around one Edward Partridge. He has fast accumulated fame as the great bear operator of the Chicago market. It was a hard road to travel for many months. The bulls did not spare him. His determination to bear the market dated from the early part of last year, and up to the first of August he had lost $600,000. His light was supposed to have gone out; his enemies proclaimed his annihilation, but somehow he continued in the procession, a little lame at times, but able to keep his feet.

May wheat was his hobby. At the time he was supposed to have been extinguished it was selling at $1.18½, but he insisted that the time would come when it would sell for close to eighty cents. He kept to his conviction, and the past month has seen him come out the winner, making, it is said, nearly a clean million in three days.

The excitement on Chicago 'Change when it was evident that the "Plunger," as he has been termed, had put to rout by his boldness the most belligerent of his enemies is one of those scenes that pen and ink cannot describe. The galleries of the trading hall, we are told, throughout the day were jammed with sight-seers, including many ladies, all eager to pick out of the jostling, yelling crowd below the man whose extraordinary gamble was causing all the turmoil. Partridge himself remained impassive as a stone, dressed in faultless attire, receiving the frantic congratulations of his

brokers on the success of his deals. On this memorable day in April wheat for May dropped from 85½ cents to 80½ cents. Partridge made five cents a bushel out of his 10,000,000 short line, besides a large amount on trades and fluctuations.

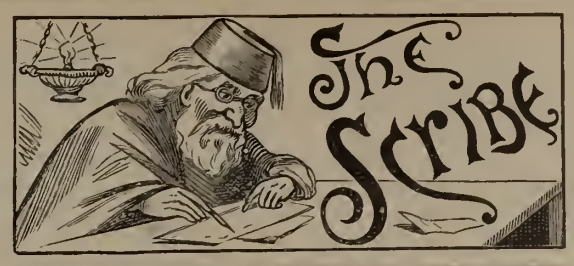
It was a long view to take from August last to May, but the soundness of Partridge's judgment has been verified by the facts. Of course everyone now sees that he was right in his predictions. Few saw with him when he stood alone; or lacked the boldness to continue their transactions, as he did, in the face of terrible odds.

EDITORIAL NOTES.

THE little chinch bug may be expected to give trouble at least in some quarters during the coming season. The Wisconsin Agricultural Station has sent out a circular in which it says of this insect: "The later brood of this insect passes the winter in the wing state under brush, corn stalks, straw piles, boards, and among dried leaves in the woods; most abundant usually around the edges in fields, in thickets, and in the borders of the woods. They emerge in April and May, lay their eggs in May and June in grain and corn-fields. Each female insect is believed to be capable of laying about five hundred eggs; and it is from these eggs that the injurious attacks proceed. It is therefore recommended that in districts infested last season all areas that would naturally serve as hibernating places should be burned over, so far as this is practicable; that all brush, straw and rubbish piles, and corn-stalks in and about infested fields, be promptly and thoroughly destroyed by burning. The more thoroughly this recommendation is put into effect the less danger to be apprehended the coming season."

KANSAS presents a spectacle unique in history. There are deserted cities scattered over eastern lands where large populations once existed; but such places flourished for centuries before they fell into ruin. In Kansas there are cities and towns that never were populated. The N.Y. Times says: "There are twenty well-built towns in Kansas without a single inhabitant. Saratoga has a $30,000 school house, and a number of fine business houses, yet there is nobody even to claim a place to sleep. Her banks remain, but they are silent. At Fargo a $25,000 school-house stands a monument of the bond-voting craze. Most of the buildings have been removed or are torn down. The hotel keeps gloomy watch over the few remaining houses, aided by the "bank." A herder and his family constitute the sole population of what was once an incorporated city. South Hutchinson is another example of a well built city without a people. It would take more than $300,000 to duplicate the buildings there, and yet one can wander through the streets without finding man, woman or child." Yet this State was "boomed" in Canada as a rival to our Northwest. Possibly these deserted places are down in the census for large populations.

THE Yank is a hustler. He can rustle, if any man can, but he sometimes hits beyond the mark, or strikes so hard that the rebound comes back on himself. Only a short time ago he was exultant over the new reciprocity treaty with Cuba, but no sooner was this established, says the Millstone, than millers throughout the entire country began to consign flour, until now Cuban ports are so entirely overloaded that even storage room is lacking. Our contemporary tells its milling readers that their interests in South America should be preceded by careful study; and then follows a piece of plain talk, to wit: "The countries of the southern hemisphere are not only thinly populated, but have such a wealth of tropical food production that their flour want is easily supplied. The true value of these countries in regard to our trade is that we should be with them in their development, and supply their current wants without destroying the value of their markets both for themselves or any other people, with the careless haste that the Cuban condition shows. Our millers are energetic in everything except the one thing—organization. The heavy expense of $3 or $5 per year as the costs of organization seem to stagger them more than losses of $500 to $5,000 on flour consignments. The same haste for results has conquered the British flour markets, but at the same time has made them profitless. But we refrain."



"WE have every reason to suppose," said Secretary C. B. Watts, "that the bill now before Parliament asking for the incorporation of the Dominion Millers' Association will become law. It has already passed the Private Bills Committee and is in the hands of the Committee on Banking and Commerce, whom we believe view it favorably. The Government has thrown no obstacles in the way, on the contrary has indicated its desire to see the Association incorporated, thus giving to it the legal basis of operations that it should possess in dealing with the various matters of commercial importance that come within its province."

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"If elevator owners," says W. A. C. Jones, of Winnipeg, Man., "were compelled by law to so arrange their elevators that every farmer's wheat would be cleaned before being weighed, it would be fairer and more satisfactory to the farmer and just to the buyer. The farmer could take the screening and get paid for his wheat. This is how it is managed at the Farmers' elevator in Portage la Prairie, and it appears to give general satisfaction. No manager or weigher at an elevator should be allowed to buy or sell grain, or have any pecuniary interest in it beyond his salary or wages. Before entering on his duties he should be required to make an affidavit before a J.P. or commissioner that he will perform the duties faithfully, honestly and do justice to all."

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Had Bill Nye any reference to MILLER subscribers when he talked in this saucy manner of certain kinds of newspaper readers? I don't run the subscription lists of this paper, but I should be sorry to think that there is a miller anywhere, as mean a man, as Nye here pictures some individuals he has evidently met. He says: "A man may use a wart on the back of his neck for a collar button; ride on the back coach of a railway train to save interest on his money till the conductor gets round; stop his watch at night to save wear and tear; leave his 'i's' or 't's' without a dot or cross, to save ink; pasture his mother's grave to save corn; but a man of that sort is a gentleman and scholar compared to the fellow that will take a newspaper two and three years, but when asked to pay for it puts it into the office and has it marked refused."

* * * *

Mr. J. E. Kirkpatrick, of Kirkpatrick and Cookson, commission merchants, Montreal, Que., has been spending a few weeks in Manitoba, visiting different sections of the province. The firm is doing quite a trade in handling consignments of Manitoba flour and grain. In regard to flour, Mr. Kirkpatrick says they have experienced considerable trouble this year with the Manitoba product, on account of the quality being lower than last year's. He thinks that millers should not try to work up damaged wheat for domestic trade. In sections of Quebec there is a little demand for low-grade flour, but the principal demand is for choice qualities. All the low-grade wheat, he thinks, should be exported. Frosted wheat cannot be used without great danger of losing the trade. Mr. Kirkpatrick does not consider the outlook very bullish, and especially for oats and barley he does not see much hope for higher prices. Manitoba farmers do not take sufficient care with their oats, and the quality is not desirable for export. As for barley, he thinks that it would be far more profitable to feed it to live stock than to sell the grain, and he wonders that Manitoba farmers do not go more into hogs and other stock to eat up coarse grains.

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Readers of the MILLER are of course familiar with the remark made by Isaac Newton, when this great man, with all his learning, compared himself to a child gathering pebbles on the sea shore. There was no end to the pebbles to be gathered, no matter how many the child had gathered; there is no end to the things to be learned even with him who possesses great learning. The thought is a happy one for young men and I want this page to be valued by the young men in the milling business to-day. One who has grown old in milling ranks has said: "Let the young apprentice lay his foundation deep, and keep in mind constantly the lofty structure that is to be. Use the best material that you can find. Let the wall contain little stones as well as large ones. They are all needed to make the structure a substantial one. The time will come when you will have reached a considerable height, but avoid putting on the top or covering as long as your foundation will admit of going higher. Look, therefore, well to your foundation. Try therefore to be looked upon by your fellow workmen as an apprentice as long as possible. There are rounds on the ladder far beyond those which associate journeymen occupy; but you will find only a small sprinkling of men on them—the demand ever being for more—your early efforts may be the cause of your becoming a foreman some day. Later on you may reach the capacity of milling engineer and designer of mills."

* * * *

The Autocrat of the Breakfast-Table, with that facetious philosophy that marks the writings of Oliver Wendell Holmes, asks: "What would be the state of the highways of life if we did not drive our 'thought-sprinklers' through them with the valves open, sometimes? Besides," he says, and I want to emphasize the thought, "there is another thing about this talking which you forget. It shapes our thoughts for us; the waves of conversation roll them as the surf rolls the pebbles on the shore." We are told that there are no good conversationalists in the present day—the art is lost. There is assuredly a difference in mankind in this respect, and just how chary some people are to exercise their "thought-sprinklers" no one knows better than the newspaper interviewer. Where does each one derive the knowledge, which too often they hug with miserly pride? We are all borrowers from others; one generation from another; the individual to-day from the individual of yesterday. I am so desirous that our friends should give interest to this page, for their own gain, either by word of mouth, or frequently, when this is not convenient, by written communication, that it seemed to me that the Autocrat's talk about "thought-sprinklers" might prove suggestive.

* * * *

Now that the Millers' Association has condemned the sowing of Colorado wheat, farmers are asking: "What next?" Our agricultural friends seem to think that they are constantly being hit by some one; if by the miller to-day, yesterday it was by the buyer of pork. "A few years ago," says a representative of this class, "the pork buyers wanted nothing but heavy hogs on the market, hogs that would weigh 400 pounds, but to-day they have changed their minds, and want light pork, hogs that will weigh from 180 to 200 pounds. So it is the same way with barley; if it is dark in color the buyer will tell you it is no good for the brewer. The best the farmers can do is to grow the wheat that will yield best. How many farmers have paid fancy prices for new kinds of wheat and other grain and when threshing time comes it turns out no better than lost Nation or other varieties, and last, but not least, when taken to market it is sold for eighty cents to ninety cents. It is hard to please some people. Some of the starving people of Russia would be glad of any kind of flour, whether the wheat it was made of is condemned or not." This is all very true, my friend, but there is a good deal in the old adage, "When in Rome you must do as the Romans do." The general public are full of notions; fashions change in all lines of commerce; some particular article is put on the market to-day and supposed to be just what is wanted, but riper experience shows that a mistake has been made, and it must be discarded. This is the way the world wags, and if the pork-eaters want to change off from light pork to heavy pork, or John Bull, or mine friend Hans, wants his beer light and not dark in color; in both cases some one is going to supply the particular need, and the man who kicks and says he wont is likely to get left. Funny world, but this is the way things go. We have all got to fall in with the procession.

ENGLISH WHEAT PRICES FOR A CENTURY.

THE following table of the average price of English wheat for each year since the year 1800 has been compiled by a local milling firm from records kept in Leith, England:

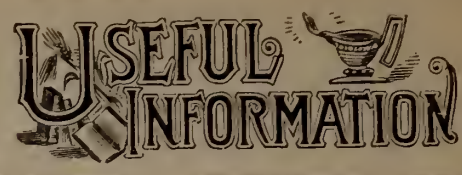
Year.	Price. s. d.	Year.	Price. s. d.	Year.	Price. s. d.	Year.	Price. s. d.
1800	113 10	1823	53 4	1846	54 9	1869	50
1801	119 6	1824	63 11	1847	69 5	1870	46 2
1802	69 10	1825	63 6	1848	50 6	1871	54 2
1803	58 10	1826	58 8	1849	44 6	1872	56 7
1804	62 3	1827	58 6	1850	40 4	1873	57 4
1805	89 9	1828	60 5	1851	38 7	1874	61 3
1806	79 1	1829	66 3	1852	40 1	1875	44 7
1807	75 4	1830	64 3	1853	53 3	1876	45 11
1808	81 4	1831	66 4	1854	72 11	1877	54 7
1809	97 4	1832	58 8	1855	70 1	1878	53 10
1810	106 5	1833	52 11	1856	73 11	1879	41 7
1811	95 3	1834	46 2	1857	60 1	1880	46 1
1812	126 6	1835	39 4	1858	47 8	1881	43 11
1813	109 9	1836	48 9	1859	43 8	1882	47 1
1814	74 4	1837	55 10	1860	48 3	1883	42
1815	65 7	1838	64 4	1861	55 3	1884	38 6
1816	78 6	1839	78 6	1862	58 2	1885	33 2
1817	96 11	1840	66 4	1863	47 8	1886	30 11
1818	86 3	1841	64 5	1864	41	1887	33
1819	74 6	1842	57 5	1865	40 1	1888	30 6
1820	67 10	1843	50 2	1866	46 6	1889	30 7
1821	56 1	1844	51 3	1867	60 4	1890	31 3
1822	44 7	1845	50 9	1868	68 4	1891	36 8

This collection of figures, says the Miller, of London, Eng., must almost be described as a graphic method of representing the social history of the country over that long period. In the year 1800 a qr. of British wheat cost 113s. 10d., while in 1891 it had fallen to 36s. 8d. The highest average price in the century was 126s. 6d. in 1812 (the year of the burning of Moscow), and the lowest was 30s. 6d. in 1888. In 1849, shortly after the repeal of the Corn Laws, the average price fell to 44s. 6d. per qr. In 1854-55-56 the average prices were respectively, 72s. 11d., 70s. 1d., and 73s. 11d.—higher prices than those which prevailed during all the years of the Anti-Corn Law agitation carried on by Richard Cobden, John Bright, Colonel Thompson, and their colleagues. Before the repeal of the Corn Laws the lowest average price recorded was in the year 1835, when a series of splendid harvests brought down the price to 39s. 4d. per qr. In the first half of the century the average price was more than double the average for the past decade; but then as those persons who remember far enough back can tell, farming was a great deal stiffer business than it is to-day.

THE STAFF OF LIFE.

THIS scientific age, which seems bent on reaching an ultimate analysis of everything upon the earth, has not neglected our daily food, and bread—the staff of life—has particularly attracted the attention of the physiological chemist. We have been told again and again what kind of bread we should eat and how we should eat it, and if the doctors who have been so good as to vouchsafe this information have consistently agreed to differ, they are none the less in grim earnest. One would have none but wholemeal bread, another would confine his fellow-creatures to bran cakes, while another would build up our frames with loaves leavened in a peculiar way. Mr. John Goodfellow, whose "Dietetic Value of Bread" forms the latest contribution to the list of books on bread hygiene, has more comfortable words than some of his predecessors. Within certain limits he sees no harm in people eating what they find most palatable, and, broadly speaking, his advice is: take the loaf which you find agrees the best with you. Still, he has not studied the chemistry of physiology in vain, and he keeps steadily in view the fact that the human body in life resembles a building of which the bricks are being constantly taken one by one. The process is so cunningly performed that the form and symmetry of the whole are not affected, but none the less the work of demolition is in constant progress, and the structure can only be maintained by constant repair. The question is, how far bread, and what kind of bread, will prove efficient in making up the wear and tear of the human tissues? Mr. Goodfellow has no objection to the use of fine wheat bread, especially where it is supplemented by other foods, but he finds it somewhat deficient in the proteids or nitrogenous elements, to which a special function has been assigned in restoring the waste of the body, and if such bread is to be a perfect food some means must be taken to raise the proportion of nitrogen. How this is to be done is not so clearly indicated. We had imagined that flours ground from sound Hungarian and North-western wheats were by no means incapable of furnishing a loaf of good color and yet rich in nitrogenous elements. According to the formula in this work the proportion of carbon to nitrogen in a perfect diet is as 15.3 is to 1, while in white bread the ratio is as 22·7 is to 1, which certainly seems a serious deficiency. The odd part of it is that our working population, the staple of whose diet is bread, will, for the most part, have nothing to say to dark-colored loaves, and does not seem much the worse. With regard to white bread, perhaps its greatest sin, in Mr. Goodfellow's eyes is its deficiency in salts and mineral matters. His conclusion in this matter is: "Those who partake of white bread should take care to supplement it largely with other foods, in order to make up for the lack of lime. If they do this, no ill results are likely to follow by eating white bread. But it is distinctly injurious to the body if it forms the staple food, and is not supplemented by other foods richer in lime. On no account should it form part of the diet of infants or children, unless supplemented by milk or other foods rich in lime and phosphates, for they require especially phosphate of calcium to form their bones and teeth, and to promote the growth of new tissue." Until an infant is at least ten months old it should not, in Mr. Goodfellow's opinion, be fed with bread, because below that age the diastasic ferments are not developed, and there is no provision for digesting starch, which is of course, largely present in all kinds of wheaten bread. The proposition that sour bread is not so easily digested as sweet bread will probably find wide acceptance, nor is it surprising to learn that bread made with yeast is much more easily assimilated by the stomach than that prepared with chemicals, such as enter, for example, into the composition of self-rising flours. We also hear that "bread made from a sponge or dough which has not sufficiently fermented is . . . somewhat difficult of digestion, owing to the stringy character of the gluten. The gluten is not sufficiently separated, and therefore a smaller surface is presented to the action of the gastric juice and other digestive fluids."

The author of this book attaches a higher value on the score of assimilability to malted than to ordinary bread on account of the larger proportion of carbohydrates present in the former. Lovers of toast will be glad to hear that Mr. Goodfellow holds that weight for weight, toast contains more actual nourishment than untoasted. . . . It is probable that the absurd notion about the action of toast on the blood originated in the observation that toast was in itself very dry, and necessitated the ingestion of a greater amount of coffee, tea, etc., than if ordinary bread had been taken." On the other hand we are warned not to take too much butter with our toast, and are advised to eat our toast immediately after preparation, not allowing it to stand "with the butter on" inside the oven or in front of the fire. Mr. Goodfellow attaches considerable importance to the flavor of food, and observes that the coarse, chaffy taste of bran bread is of itself sufficient to cause its rejection by human palates. He is by no means an out and out champion of wholemeal bread. His remarks on this subject are interesting. He says: "Ten years ago very little wholemeal bread was eaten in this country. The bread which was supplied under the name of 'brown bread' was usually made from a mixture of white flour and bran, and resulted in a loaf far inferior in nutritive value to the ordinary white loaf." The growth of a market for wholemeal bread of late years is no doubt the work in the main of food reformers, who are never weary in insisting on the superior richness of such bread in albuminoids and phosphates as compared with the typical white loaf. Mr. Goodfellow sums up by remarking that he "is not opposed to the use of wholemeal bread, provided the meal is properly prepared"—that is to say, the meal must be ground very fine, to avoid the injurious effects of coarse, branny particles on the intestines. Coarse wholemeal bread the author of this manual would on no account give to children. But he maintains the best loaf for the nursery is to be made from wheatmeal broken into very fine particles.—The Miller, London, Eng.



It has been determined by careful engineers that engines placed on sandstone foundations should be oiled so that the foundation be kept free from drippings, otherwise it will be softened and rendered dangerous. Instances are cited where engines thus got out of plumb and when given timely attention as much as an inch of the stone surface was found so soft from oil drippings that it could be readily peeled off.

So long as it was considered that there was some mysterious cause for the explosion of boilers there might have been an excuse for the continued running of a boiler which was in bad order, but it is now very clearly understood that mechanical and chemical action is capable of producing rapid deterioration of boiler plates, and unless these causes are found and removed, an accident will certainly follow. In too many cases the engineer in charge of a plant has no authority whatever regarding repairs, other than to fix a breakdown after it has occurred, or make such repairs as he is able to do at times when the machinery is not in operation.

If those having boilers which have never had any compound used in them, will go to such boilers and knock off the heavy scale, they will in nearly every case, find the plates badly corroded. This was caused by the scale itself. Now, if that scale had been removed by a boiler purger, and the plate had been found corroded, immediately it would have been charged to the purger. As between scale, pure and simple, on a plate and a boiler purger, the former is the most injurious. Yet the scale is suffered to remain, and the boiler purger is charged with doing injury to the boiler. People seem to have a great horror of boiler purgers, but no fear at all of scale in boilers.

For the protection of mill chimneys against lightning, a wire rope or cable weighing four pounds to the yard has been found the most efficient conductor. There is no need of going to the expense of insulators. They are useless on lightning conductors, and the cable may be fastened direct to the chimney by staples or small eye-bolts. Connection should be made with the cast iron plate at top of chimney, and a good way to do this, is to tap in one eyebolt, then solder the cable to the eyebolt. A plumber's wipe joint is the best way of soldering. If desired, a second cable may be attached and connected together by iron rods placed near enough together for steps. This makes a good ladder, as well as the best lightning conductor that can be made, unless the expense is met of making the cable of copper wire. If copper is not used, soft "Norway" iron is better than steel.

If you will stop to consider a moment, says a writer to Power, you will find that the outside of the belt has the most strain on it, on account of the fact that all the stretching takes place on this side of the belt every time it goes around the pulley; and it ought, therefore, to be the strongest part of the leather. The grain side is the strongest side, as, by splitting the hide close to the grain you get good lace leather, while the flesh side makes very poor leather for any use. It is very fibrous, spongy and open; and I have found in my twenty-five years in mills that oil and dust particles in the air always settle on the outside of the belt. Now, on large pulleys, if the flesh side is placed out it will open its fibre as it passes around the pulley, and in time these cracks become filled with oil and grit; which would not be the case if the grain side was placed out, because the fibers are just twice as close on this side, which is the life of the belt. If you are running a fan with one belt and put another one on the other side, you can nearly double your pressure and yet not tighten the first belt; but tighten the first belt to double the strain and this one will do the same work, but it will take more power to do the work on account of the increased friction on the shaft caused by the pull of the tight belt; and where many belts are used in this way it will take double the amount of power really necessary to run the mill.

BEST RESULTS
HIGHEST MERIT

ALWAYS ATTEND

GREEY MILLS AND

RELIABLE
SATISFACTORY
DURABLE

GREEY MACHINERY

Read these voluntary Letters recently received:

AFTER RUNNING SIX-AND-A-HALF YEARS

ORWELL, April 4th, 1892.

MESSRS. WM. & J. G. GREEY, Toronto, Ont.

Gentlemen, - Please send me 6 brushes for a 6 x 15 inch roll. This will be the first cent the rollers have cost us since we started. They still hold their corrugation and look as well as ever.

Yours truly,

E. R. WHITE, Miller, Orwell.

RICHMOND, Ont., April 5th 1892.

MESSRS. WM. & J. G. GREEY, Toronto, Ont.

Dear Sirs,—We have had a big trade this winter. Mill doing first-class.

Yours, etc.,

MCELROY & GEMMEL.

WHEATLEY, Ont., March 22nd, 1892.

MR. J. G. GREEY, Toronto, Ont.

Dear Sir,—We have our mill in splendid shape. Everything works well. The rolls you last sold us just work charming. We claim that we have the best mill in Western Ontario, at least we are making the best flour and giving the best results. Mr. Greey, I thank you for your kindness. My mill is giving excellent satisfaction.

Yours truly,

D. OMSTEAD.

TEESWATER, Ont., March 22nd, 1892.

MESSRS. WM. & J. G. GREEY, Toronto, Ont.

Gentlemen,—We would remark that we have strong competition here now, but are happy to say that we can beat them every time.

Yours truly,

JAMES ROBERTSON,
Miller for Andrew Little, Teeswater, Ont.

GARDEN HILL, Ont., Feb. 24th, 1892.

TO WM. & J. G. GREEY, Toronto, Ont.

Gentlemen,—I have pleasure in accepting the mil you built for me and handing you settlement for same in full, and in doing so I can say that I am fully satisfied and pleased with all your dealings with me. The mill is fully up to your guarantee and the work done by your Mr. McKeown is first-class, the millwrighting being solid and substantial and the mill running very smoothly all through. I believe I was fortunate in entrusting my contract to your firm, as all our dealings have been of the most agreeable nature.

I have compared the work of the mill with some larger mills in this locality and I believe it is fully up to any of them.

Wishing you every success, which your dealings with me would lead me to believe you deserve, I am,

Yours truly,

J. DOUGAN GRAY.

High-Class Machinery for Roller Flour Mills

Manufactured by

WM. & J. G. GREEY 2 CHURCH STREET

TORONTO, ONTARIO

The Little Wonder REEL

Is Cheaper at Double its Price

Than any other Reel as a Gift

FORESTERS FALLS, Ont., April 25, 1892.

WM. & J. G. GREEY, Toronto, Ont.

Dear Sirs,—In reply to your letter about how we like the "Little Wonder Reel," we are well pleased with it. We think it does more work than any three reels we have, and believe it to be far ahead of a centrifugal reel.

Yours truly,

DELARMA BROWN,

Per H. D. Gardner, Head Miller.

CHATHAM, Ont., April 8th, 1892.

WM. & J. G. GREEY, Toronto, Ont.

Gentlemen,—We have been running your Little Wonder Reel now for some two weeks and it is giving splendid satisfaction, being just what we needed to make our second grade of flour lighter in color and of even make. Your draft for same has been presented and paid. We may require another of the Reels in the near future; meantime, we are

Yours very truly, CAMPBELL & STEVENS.

UNEQUALLED FOR BOLTING OR RE-BOLTING ANY STOCK IN THE MILL

SO SMALL, IT GOES ANYWHERE

RUNS SO EASY, NO TROUBLE TO DRIVE

WM. & J. G. GREEY

2 CHURCH STREET

TORONTO, ONT.

CANADA.

Grain shipments from Morden, Man., to date are 550,000 bushels.

Lowick & Peebles, millers, of Tiverton, Ont., are extending their business.

William Ritz, grain buyer, Rosenfeld, Man., has opened in the implement business.

S. Parrish, grocer, flour and feed, Calgary, N.W.T., has opened a branch at Edmonton.

Holland Centre, Ont., has some hopes that a grist mill will be established in its midst.

Huston Bros., grain warehouse, Glencoe, Ont., burned; loss $3,500; partly covered by insurance.

J. D. Sibbald, commission merchant, Regina, Assa., is succeeded by the Western Milling Co.

The Welland Canal is beginning its season's work. The first ocean steamer for the year has arrived.

The Midland flour mill, Midland, Ont., is closed and the local trade secure their supplies from Penetanguishene.

The roller mills at Millwood, Man., are closed down, having been running for the last six months principally on gristing.

It is stated on good authority that another elevator will be erected this summer at Moosomin, Assa., by a milling company.

Sixty-two bushels of Prize Prolific barley were threshed from the yield of 1 bus. of seed on a farm north of Regina, Assa.

Numerous charters for carrying grain from Duluth to Buffalo and Kingston have been made at four and five cents respectively.

Silas Milligan, who has been head miller in the Huron Roller Mills for five years, has resigned the position and gone to Norland, Ont.

Noah Wenger, of the firm of Wenger & Bros., millers, Ayton, Ont., had two fingers of the right hand cut off the early part of the month.

The flour and feed establishment of James McIntosh, Toronto, was damaged by fire to the extent of $15,000. Insured for $9,000.

It is intimated that the Lake of the Woods Milling Company and another firm intend to erect elevators at Regina, Assa., this summer.

The grist mill at Portage du Fort, Que., has been leased for a term of five years by Gerald Brabagon. Dr. G. A. Purvis is the owner of the property.

The property of the Clyde Milling Co., of Lanark, Ont., consisting of flour, oatmeal, oat and barley mills, with a large stock of grain, has been destroyed by fire.

John P. Cline, a farmer from Saltfeet, Ont., had twenty-eight bushels of seed peas and oats, purchased a day or two previous in Hamilton, stolen from his barn.

W. R. Cahoon, of High Bluff, Man., is making arrangements for the erection of a flour mill and machine shop at Carnduff, which is to be completed for the year's crop.

Farmers in some sections where the land is low fear that the cold north winds that have prevailed to some extent during the month have had a disastrous effect on fall wheat.

The ratepayers of Calgary, Man., by a majority of 202, have bonused a flour mill for that growing town. The bonus is $3,000, and exemption from taxes from ten years.

Melita farmers have applied for the ground to build an elevator. Carson Bros. are also building an elevator at this Manitoba town, and still a third new elevator is talked.

Duluth News says that Martin, Mitchell & Co., of Winnipeg, are exporting 60,000 hushels of wheat to Leith, Scotland. They expect to export about 300,000 bushels during the next month.

The schooner Albacore is loading at Toronto with 20,000 bushels of fall wheat for Thomas Flynn. This will be forwarded direct to Montreal in order to catch the first outward bound steamer.

The Columbia Flour Mills, of Enderby, B.C., shipped no less than sixteen cars of flour, amounting to nearly 300 tons, last month. This is the largest shipment of flour in one month ever made by the mill.

The opening of navigation on the St. Lawrence will be the signal for the beginning of a very heavy export grain trade. Already about 2,000,000 bushels of grain have been booked for the St. Lawrence route.

The water-wheel in the Pakenham grist mill having got clogged, Mr. Wm. Munro, of Pembroke, Ont., went down, put on his diving suit, and removed the obstruction—a large block of ash wood—and the mill is now in full blast again.

A young man named Garrett, whose father lives near Rollin, Hastings Co., was on Saturday afternoon so seriously injured by the running away of a team which he was driving before a seed drill that his death will probably result.

McDonald's elevator, owned by the Grand Trunk Railway, at Cobourg, has been destroyed by fire. The elevator contained about 10,000 bushels of grain, consisting of barley, peas and wheat. The contents were fully covered by insurance.

Prof. Saunders, of the Experimental Farm, complains that the year's sales of Canadian barley in England have not been satisfactory, owing to the fact that England preferred the two-rowed barley, and sufficient care was not taken in preparing the shipments for the English markets.

Seven of the freight cars which helped to make up the train that was wrecked on the Northern Pacific at Grand Forks, recently, were loaded with bonded wheat from Manitoba. The wheat of two cars is a complete loss, and about one-half of the cargo in the third car is the same.

On the morning of the 5th instant a fire broke out in the elevator owned by Mr. King Maybee, of Sidney, Ont., and occupied by Mr. F. F. Cole, grain buyer, of Toronto. The elevator was completely destroyed, along with about 20,000 bushels of grain which was in store at the time.

Mr. James A. Jamieson, general superintendent of elevators on the C. P. R. system, states that plans have just been received for a 1,500,000 bushel elevator in Boston for the reception of western grain arriving in that city over the Boston & Maine, and that its construction will be proceeded with forthwith.

A farmer named Thomas Latimer, living near Pilot Mound, Man., is in the Winnipeg hospital with a broken leg and splintered bone. He had been to the local grist mill, when the horses took fright from a passing train. In his effort to hold them he was knocked down, and horses and waggon ran over him.

The Lake of the Woods Milling Co. has started operations at Portage la Prairie, Man., in taking down parts of the old mill and the erection of a new one. When completed the mill will have a capacity of 700 barrels of flour per day, with a wheat elevator of 175,000 bushels capacity. The new additions will cost over $50,000.

On the morning of the 19th ult., the floors in the rear portion of a four-storey building at 111 Adelaide Street West, Toronto, collapsed. The premises were used for general storage purposes and among the stocks that came to grief were 6,000 bags of flour of the Citizens' Milling Co. The loss, if any, to this well-known concern, will be trifling.

The committee appointed at the recent meeting at Macdonald, Man., where it was decided to build an elevator this summer, has met with much encouragement in that vicinity and in town. The proposal is to form a joint stock company with $20,000 capital stock, and when a sufficient amount of this stock has been taken up, the erection of a 100,000 bushel elevator will be begun at once. On the first day the stock was offered $3,000 of it was subscribed by the promoters.

The grist mill of Rentz and Pilatyke, of Eganville, Ont., has been completely destroyed by fire. The cause of the fire is a mystery. The building and machinery were valued at over $10,000, and were insured in the Lancashire and London companies for $6,000, one-half in each company. Great sympathy is felt for the partners of the firm, who had under great difficulties completed the mill only about two months ago, and who from the patronage they had received during that time, were looking forward to a successful and prosperous business. A quantity of wheat and flour was also burned.

An appeal under the recent County Court Appeals Act, of Manitoba, was heard before Mr. Justice Killam in an action of Cooper vs. the Municipality of North Norfolk. The plaintiff, a barrister and solicitor, residing at Carberry, sued the defendant municipality for services rendered by him. The defendants had passed a by-law offering a bonus to any party erecting a flour mill at Austin station in defendant's municipality. Defendant's council passed a resolution empowering a committee called the "Austin mill committee," consisting of the reeve, one Pickering, and Councillors Duncan and McDougall, to attend to matters relating to the mill and to have the agreement drawn with parties undertaking to erect the mill under the by-law. Acting under the instructions of the mill committee the plaintiff performed the services, payment for which he sought to recover in this action. The case was tried before Judge Ryan, who entered a verdict in favor of the plaintiff for $113.16. Against this the defendants appeal. Mr. Culver, Q.C., for defendants Mr. Hagel, Q.C., for plaintiff.

Hy. T. Kneeland, a prominent member of the New York city grain trade, died, recently, aged 53.

The Millers' National Association, of the United States, will meet in Chicago on the 24th and 25th inst.

It is reported that the prohibition of the exportation of grain from Russia will be withdrawn this month.

The Czar has expressed his gratitude to the people of the United States for their contributions of flour to his starving peasantry.

The amount of wheat in sight on this side and the ocean is 76,500,000 bushels; at the same date last year there was a trifle over 59,250,000 bushels.

The steamship Conemaugh, with a cargo of a million pounds of flour, 800,000 of rye and other provisions for the famine sufferers of Russia, sailed from Philadelphia for Riga, Russia, on the 25th ult.

Attention has been called to the adulteration of Italian flour. Several times it has been remarked that some Italian dealers do not hesitate to mix marble-dust with their flour; others add caustic baryta.

Famine in the north of Hungary is spreading. Two thousand persons have been without food for a month in a commune near Munkais. Many deaths from starvation are reported. In fifty communities the suffering is extreme.

As a result of being squeezed by Partridge and other smaller Chicago bears, Chas. F. Johnson, of the milling firm of C. F. Johnson & Co., Marshall, Minn., has lost over $40,000 and has turned his property over to his partners.

Two thousand sacks of the flour placed aboard the steamer Conemaugh, at Philadelphia, by the Russian Relief Committee, was sold to the committee by the Philadelphia agent of the Imperial mill, and the Imperial folks have received the check of Rev. T. De Witt Talmage, the famous Brooklyn divine, in payment for the purchase, Dr. Talmage having charge of that part of the committee's work. The flour goes to Riga.

In a fire which destroyed the mill of J. G. Patton & Co., at Catlettsburg, Ky., April 10, Charles McCoy, the miller, lost his life. McCoy ran to get the books, which were on the second floor. Before he could return he was cut off by the flames. Driven back, he climbed upon the roof. Eflorts were made to save him, but before he could be reached, the roof went down, carrying him into the flames. McCoy was to have been married in a few days to a young lady of Catlettsburg. The loss on the mill is $50,000; uninsured.

There is now in store in Duluth elevators more wheat, with one exception, than has ever been collected in one market at one time in the history of the American grain trade. The total is about 15,265,000 bushels, and all but 140,000 bushels is the finest milling grades. There is also about 200,000 barrels of flour waiting shipment east. It will take nearly four hundred vessels of the larger class to move out this accumulation, and the largest fleet ever seen on Lake Superior is expected there in May. In April, 1885, Chicago elevators held 15,881,000 bushels of wheat, which is so far the high-water mark.

An Australasian contemporary contains a bitter lament by a Victorian farmer concerning the apathy of his fellow agriculturalists, who, as he alleges, give the miller his way in everything. It appears to be the custom in Victoria for the farmer to sell the bag with the grain, which in times of low prices for produce no doubt constitutes an appreciable tax. Last year, according to this authority, the prices ruling in the Melbourne market did not, in the case of wheat, average above 2s. 6d. to 3s. a bushel, and 1s. 6d. to 1s. 8d. for feed oats. He adds, "take 3d. off for freight, bags 1½d., commission 1d., total 5½d. per bushel. That does not leave much for the grower."

An instructive case for British flour importers is to hand from the Liverpool County Court. An action was brought by a firm of flour merchants in the great Mersey port against the owners of a steamship to recover £40 for damage to 500 flour sacks. The plaintiffs alleged that the flour was conveyed by the defendants under a charter-party from the United States port of Newport News, and that it had in transit become "caked," and acquired a disagreeable odor from having been stored in the same hold with a quantity of green wood. The evidence tendered did not, however, establish as a fact that the flour and wood came off the same vessel, and in the end the judge ordered a non-suit on the ground that no contract had been shown.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

EXPORTERS' DIFFICULTIES.

A SUCCESSFUL trade abroad in Canadian flours calls for more than the manufacture of a flour of that high quality that will recommend itself to the customer on the other side of the sea. Canadian millers have met the first requirement effectually; for no flour goes abroad that excels in quality that bearing the brand of Canadian mills. Nor is it enough that we have a representative of Canadian mills in foreign markets. He can do much to secure a fair share of trade for his clients, providing all other conditions are satisfactory; but are these conditions satisfactory?

A recent number of the Northwestern Miller contains an interview with a representative of one of the largest milling concerns in the country, who returned within the past month from Europe, where he had exceptional opportunities of discussing with British millers questions of the nature of the present bill of lading, "splits," or broken shipments of flour, and insurance. These matters have given no end of trouble to exporters of flour in this country and impaired in a large degree the encouraging foothold that they have obtained in Europe by means of the unexceptionable quality of their mill product.

Mr. Samnis, the gentleman in question, says: "His contact with the foreign trade has rendered him more keenly alive than ever to the crying need of some reformation in the present transportation facilities for handling export flour. He was present at a meeting of representative flour men in Liverpool, and found the foreigners very earnest in their desire for relief. They want, and are working for, a new bill of lading, and also for different insurance. The $75 clause embodied in the present bill of lading, they claim, really covers nothing. There is considerable damage which is done to flour while being transported from its western destination to the seaboard, and it is called abroad "country damage." Sometimes this is receipted for as country damage and sometimes not. When the flour arrives on the other side of the ocean, this damage is looked into in the most critical manner, experts being employed, when the flour has been wet, to determine by scientific analysis whether the damage resulted from fresh or salt water. If it is found that it came through the agency of fresh water, or otherwise, under the head of "country damage," any claims made are thrown out as not being covered by the insurance. Separate insurance is written on the vessel and the cargo, and where the liability of one class of underwriters ends and the other begins is not clearly defined. The exporter, therefore, feels that something ought to be done toward obtaining marine insurance of a character more definite and clear in its terms."

The annoyance that is caused by what is termed "splits" is stated in these words: "A London firm may buy 1,000 sacks, and after the lot arrives at the seaboard, instead of all going on one vessel, it is perhaps divided between three or four, whose sailings are on different dates. Now, when the first lot arrives in London, the firm is required to take up the document of the entire 1,000 sacks, though the last part of the shipment may not get along for a month or two later. In case this flour is contracted to a customer in one lot, the fragmentary parts have to be held, at more or less expense, until the full quantity is got together in order to make a tender. Again, in case two or three sacks out of a lot of 250 are found half full, the buyer has no way of securing recompense for the deficiency, and he consequently has to stand the loss himself. If there are enough sweepings to make up the quantity lacking, he is fortunate."

There can be no doubt that Canadian millers are in thorough sympathy with the objects sought for by the British importers. The evils complained of are common to them as to United States millers. "It is simply outrageous," to quote from a letter of a leading Canadian miller and exporter just received, "that flour shipped from here in February should not leave the seaboard before the middle of April, especially at times like this when flour in Europe has been dropping one shilling per week and ocean freights much lower when they took the freight from here than when it started on its ocean journey." The importer asks nothing less than is due when he claims that the bill of lading should make sure the delivery of the flour within four or six weeks of time of shipment and an insurance clause that will protect them from loss on flour by damage of all kinds.

These have been matters of agitation with Canadian millers at every convention for years. Like the United States millers they have still failed to secure the much-needed reform. Perhaps as an incorporated organization their influence in certain quarters will be more potent and effective. It is not usually wisdom to dogmatize in these matters, but the evils are sufficiently aggravated that, be the fight easy or difficult, Canadian millers have about exhausted their patience and may be expected to take hold of the question in downright fighting humor, and not rest until victory is secured. The business is one that cannot longer remain handicapped and shackled by these unnecessary and unbusiness-like trammels.

LIGHT ON THE NEWFOUNDLAND TROUBLE.

Our friends in Newfoundland have their own way of doing things, the newspapers not excepted. Nothing less than a pretty pink paper will answer for their newspapers, and they know the value of black lines and italics, and plenty of them, to give prominence to any particular views they desire to emphasize. One of the April issues of the Evening Telegram, of St. John's, Nfd., is in our hands, containing a reprint of the editorial in the March MILLER on the Newfoundland trouble, set off with such startling headings as the following: "Tired of Tariff War," "The CANADIAN MILLER on Newfoundland Affairs," and black catch lines and italics in generous profusion throughout the column and a quarter given up to the article.

It is all right, brother; with yourself the MILLER has but one object to secure in this discussion, and that is a common-sense, business-like settlement of what is a business difficulty, and if extraneous matters could only be eliminated from the negotiations we believe, with you, that the trouble would soon be a thing of the past.

Referring editorially to the MILLER'S article the Telegram says: "We are sorry for the flour men of Ontario and Manitoba. Hitherto our trade relations with them have been of a most satisfactory character, and their own rulers are solely to blame for the present difficulty. If the millers of Canada lose their large and valuable flour trade with Newfoundland they will not be able to blame the Government of this colony for it. Everything possible has been done by the Ottawa Government and their unscrupulous agent here to irritate and annoy our rulers and people. They were cautioned as to the inevitable result of such a policy, but openly disregarded all advice from this direction, except what reached them through their own agent."

Because these trade relations are of "a most satisfactory character" is one important reason why, in the business interests of both countries, we regret the present difficulty. The Telegram throws the blame upon the Canadian Government. Others think England most blameworthy. A special correspondent—a Canadian—whose letter appears on this page of the MILLER, and who has spent some time in the island-colony, making himself acquainted with trade conditions there, believes that both Canada and England have acted mistakenly and injudiciously in their transactions with Newfoundland. In a personal letter to the MILLER he does not hesitate to place the case very plainly, saying: "If Canada had only a fraction of the trouble to contend with that Newfoundland has had to put up with from such a combination of difficulties that have arisen during the past 400 years between herself and England, instead of remaining a true and loyal colony she would be worse than any tail-twister in Washington."

We have already remarked that it is with the business view of the case the millers and business men of this country are concerned. Governments, whether here or across the sea, must settle questions of an international character in their own way. And in this day, when the best men of all nations do not hesitate to meet in international conferences and discuss questions affecting their different interests and usually arrive at a satisfactory solution, we do not consider that the difficulties between Newfoundland, Canada and England, are so aggravated in their nature that they cannot be settled in a similar manner. We do say, however, wherever the fault may be, that it is a shame that, pending the time necessary to conclude such negotiations, the business transactions, which had been going along pleasantly, satisfactorily and profitably to all concerned, should be brought to a complete standstill.

This is exactly the business situation in the Newfoundland matter. The island wants our products; we are satisfied to sell them; the affair is mutual. By means of a modus vivendi or other business-like plan the Governments of both countries ought to be able to meet the business side of the trouble. This is the voice of the people in both countries. What answer have the rulers?

NEWFOUNDLAND LETTER.

[Special correspondence CANADIAN MILLER.]

The prospect of an early settlement of the difficulty between Newfoundland and Canada is now looking brighter, as at last we find that communications are passing between them.

On the 27th March a dispatch was received in Newfoundland from Lord Knutsford stating that Canada was willing to come to an understanding so that the statis quo anti of 1889 might be arranged.

Another dispatch a few days afterwards states that Canada was willing to negotiate with the United States a similar treaty as arranged by the Bond-Blaine convention.

Sir William Whiteway, the Premier of Newfoundland, is very anxious that something should be done, but states that it is impossible to do anything while Canada holds that protest against him in London.

He is quite willing to negotiate on what terms this protest should be withdrawn, but Canada must treat this matter in a generous and liberal manner before any settlement can be arrived at.

He says if he were willing to accept this statis quo anti of 1889 that he feels certain Canada would still have objections, as one of the terms then was that Canada should pass a bait act similar to Newfoundland's and rigorously enforce it against the French fishermen. This she objected to, and it prevented a final settlement at that time.

Then again he very correctly points out that Canada has been trying for years to make a treaty with the United States over the Atlantic fisheries, but has not been able, and the arrangement he has been so fortunate in negotiating is a step in the right direction; but, instead of assisting this forward, they are doing all possible to stop it.

It is absurd to say that he is not fully protecting the interests of this fishery, as Canada herself now states that she is willing to accept similar terms as he has arranged with the United States.

It is a very dog-in-the-manger policy for Canada to say: "I am not going to let you get any advantages with the United States because I cannot get them."

The secret of why Newfoundland has been able to negotiate this treaty is that she is blessed with an abundant supply of small bait-fish, without which it is impossible to carry on the cod fishery, and by her geographical position she virtually commands the success of this fishery.

Newfoundland is quite willing that all British subjects who have an interest in her welfare should benefit by free access to these fish, but it cannot be expected that

another colony should trade on this source of wealth as Canada has done in the past.

To give an example of what Canada has gained from this, we have only to look back to the last fishery treaty made with the United States, which was a reciprocal agreement for ten years, allowing the free entry of all fish into both countries, but in addition to this it was shown that the bait was an advantage that the United States had to pay for and was assessed at $5,000,000.

Newfoundland now clearly proves that she was entitled to this money, but we find that Canada grabbed the whole award and would not give up any, and the $1,000,000 that was apportioned as Newfoundland's share came out of the English treasury.

Had Canada studied the interests of Newfoundland there is no doubt she could have brought about Confederation long before this, but instead of fostering a kindly feeling she has taken another course, and Newfoundland feels that her interests, no matter what they are, have always been subservient to Canada, no wonder she now resents it, and is determined to make her own arrangements independently.

It is a shame on Canada that she should now hinder the progress of Newfoundland, just because they should try to better their own condition without first consulting her.

The Bond-Blaine treaty should be allowed at once and Canada should help Newfoundland all she possibly can to make the best terms possible. This very arrangement will be a stepping stone for Canada to get the same advantages. It is really too bad that these troubles should exist, and Canada should endeavor to bring about Confederation. The probabilities are that if a liberal offer was made there would be very little opposition to its acceptance.

TERRA NOVA.

St. John's, Nfld., April 14, 1892.

MARKET CONDITIONS.

A slightly improved tone, possibly, has marked the flour market, since our summing up of conditions a month ago, but the change is almost imperceptible. There is little likelihood of Canadian millers being in a position to do any trade with Newfoundland this season, and "the consequence is," says the Montreal Trade Bulletin, "that at the opening of navigation we will see the heaviest shipments of American flour from this port to Newfoundland ever before experienced, it being estimated that there are already about 45,000 barrels of product awaiting the arrival of the first steamers for Newfoundland." Where the surplus Canadian flour is to find a market is a matter of serious concern with millers at the present time. The English market is expected to furnish an outlet, but the steady decline in prices during the present month does not augur for a profitable trade there.

PRICES OF FLOUR AND MEALS.

Quotations at leading market centres are as follows:

Toronto: Very little movement in flour, Manitoba patent and strong bakers' leading when there is any activity. The former has sold at $5.15. Straight roller is quoted at $3.90 to $4; and extra at $3.75 to $3.80. Oatmeal is bringing $4 in small packages, but really very little doing; bran is $13 to $13.50 per ton and there is plenty to supply the demand.

Montreal: The flour market is sluggish. Considerable quantities of Manitoba flour are being offered on this market, but sales are difficult to make. On the 2nd inst. the quantity of flour stored here was 67,023, as against 90,022 barrels for week previous. Of oatmeal the stock was 5,110 barrels. Prices: Patent, spring, $4.90 to $5.10; patent, winter, $4.85 to $5.05; straight roller, $4.35 to $4.50; extra, $4.05 to $4.20; superfine, $3.70 to $3.90; fine, $3.20 to $3.50; city strong bakers', $4.75 to $4.85; Manitoba bakers', $4.40 to $4.65; Ontario bags, extra, $1.80 to $1.90; straight rollers, $2.05 to $2.10. In oatmeal competition is being felt from the west and prices are cut low. Rolled oats and granulated, $3.90 to $4 per barrel; in bags $1.90 to $1.95. Standard in barrels averaging $3.80 to $3.90; in bags, $1.82½ to $1.90. Mill-feed is slow as molasses; brans $15 to $15.50; shorts, about $16; middlings, $17 to $18.

Winnipeg, Man.: Prices per 100 pounds; patents, $2.40; strong bakers', $2.20; second do., $1.80 to $2.00; XXXX., $1.20 to $1.40; superfine, $1.10 to $1.15.

Office of the CANADIAN MILLER,
May 14, 1892.

THE GENERAL SURVEY.

BUOYANCY has been an element almost eliminated from the wheat market of the past month. True, these conditions date back of one month, but it was hoped that the comparatively low level reached in March and the early part of April would have shown some rebound by this date; but except that there has been an occasional spasmodic jump within the week closing, as when July wheat went up to 84¼c., the same old story of continued deadness must be recorded. The sensation of the month has been the wonderful streak of luck that has come to the Chicago bear, Partridge, who is supposed to have made a clean million when May wheat touched 80½c.; we have made more extended reference to his case in our editorial columns.

The MILLER has suggested for many months that the shortage in European countries was at no time as great as we were led to suppose from the reports of the early part of the crop season. Information is now coming to the front that proves the correctness of this view. Making all allowance for the distress from famine in Russia still the effect upon the world's wheat market has not been nearly as aggravated as it was first presented. India was supposed to have shared in the sunshine of Providence that gave to it a bountiful crop, but who was prepared for the announcement that the exports of wheat from India to Europe during 1891 would reach the large total of 1,397,466 tons, more than double the quantity exported in 1890, and 264,722 tons above the highest figures recorded for any previous year. For the preceding seven years the distribution of the exports has been fifty-one per cent. to Great Britain and forty-nine per cent. to the continent; last year it changed to forty-one per cent. to Great Britain and fifty-nine per cent. to the continent. This one factor must necessarily have had an important bearing on conditions in America, whilst the crop here has certainly not come short of the early predictions, and, what is more likely, will be found ultimately to have exceeded first figures. Are low prices altogether surprising?

The Australian Miller, in its monthly review of the markets, under date of March 15, the latest issue received at this end of the world, summarizes the local situation thus: "In Victoria the holding policy of farmers still continues. Our endeavors to ascertain some tangible reason for their action has resulted only in discovering a general feeling against taking under forty-five at their respective stations, and the expectation that the official statistics will reveal a much smaller supply than the various estimates have indicated. Meantime, their action, while steadying prices in some measure, and reducing freights, is also killing export enterprise, driving freight elsewhere, and keeping wheat in the country, which, if exported, would have rendered high prices for the residue not only possible, but certain. It is most unfortunate for our New Zealand neighbors, but slightly in favor of Australian wheat, that such heavy and damaging rains have fallen during harvest throughout both Otago and Canterbury. It is hardly possible to ascertain yet what injury has been done; it is great, but a portion of the crops were saved uninjured. We regret being unable to report the financial stringency in any way relieved."

What the crop yield will be for 1892 is a subject that is engaging the attention of many just as we are emerging out of the winter season. Of the crops in our own country we have no collected data before us up to the time of writing. What reports have been received vary; fall wheat in some localities is reported to have come through the winter looking well; in other localities where north winds have prevailed the report is that it has suffered considerable within the past few weeks. One journal says of the crops in the United States: "The Government condition for April suggests more to the one who makes a painstaking investigation into the records of the Government crop statistics than the one who takes the conditional figure, 81.2, by itself and draws such deductions as it alone suggests. Alone it does not indicate a very small winter wheat yield. On the basis of the 1891 crop statistics it even indicates a large winter-wheat yield, about 330,000,000 bushels, only 62,500,000 bushels less than last year and only 53,000,000 bushels less than in that other unusual year, 1882. But on the basis of any other year than last, for instance, on the basis of the 1882 crop, a condition of 81.2 suggests a final yield of less than 300,000,000 bushels. This is assuming an acreage the same as in 1891, an assumption probably too liberal; and this is also assuming that the April condition will be maintained at harvest, another assumption altogether too liberal."

A dispatch from London, Eng., dated the 5th inst., says that the farm outlook in Britain has greatly improved since April began. There had been a return of winter for one week, but the rest of the month was fine and sunny as a rule, allowing farmers to get in all their spring grain. After a dry and frosty winter the land worked splendidly, so that barley and oats were put in under unexceptionally favorable conditions, and for the most part have come up thick and strong. The wheats vary a good deal in appearance. All are backward, but while those sown early in the autumn look well, the late fields are thin and weak.

WHEAT.

The demand is light; prices a trifle firmer. Liverpool, Eng.: Spring wheat, 7s. 2d. to 7s. 2½d.; red winter, 7s. 2½d. to 7s. 3d.; No. 1 Cal., 7s. 5d. to 7s. 5½d. Wheat dull; demand poor. American:—Chicago: Cash quotations, No. 2 spring wheat, 82¾c.; No. 2 red, 86 to 86¾c.; July wheat, 82⅜ to 82¾c. New York: No. 2 red, 96½ to 98⅜c. afloat, 97½ to 98⅛c. f.o.b.; ungraded red, 98 to 98¼c.; No. 1 Northern, 92⅜ to 92½c.; No. 2 Northern, 86⅞c.; No. 2 Chicago, 90¼c.; No. 2 Milwaukee, 90¼c.; No. 3 spring, 87¾ to 88c.; options were rather dull, but advanced ⅛ to ⅜c. and closed firm, chiefly on local manipulation, but helped by light interior receipts, foreign buying and liberal clearances; No. 2 red May, 91 to 91⅜c., closing at 91⅜c.; June, 91 to 91⅜c., closing at 91⅜c.; July, 91 3-16 to 91 11-16c., closing at 91⅝c.; August, 90⅞ to 91⅛c., closing at 91⅛c.; September, 90¾ to 91⅛c., closing at 91⅛c.; October, 91⅝ to 91¾c., closing at 91¾c.; December, 93½ to 93¾c., closing at 93¾c.; May, 1893, 97¼ to 97½c., closing at 97½c. St. Louis: No. 2 red, cash, 85⅜c.; May, 85⅜c.; June, 83c.; July, 81c.; August, 80¼c. Duluth: No. 1 hard, 85¼c. for cash; 85¼c. for May; 86¼c. for July; No. 1 Northern, 82¾c. for cash; 82¾c. for May; 84c. for July. Canada:—Toronto: White, 82 to 83c.; spring, 80 to 81c.; red winter, 82c.; goose, 75 to 76c.; No. 1 hard, 99c. to $1; No. 2 hard, 93 to 94c.; No. 3 hard, 83 to 84c.; No. 1 regular, 66c.; No. 2 regular, 59c. Winnipeg, Man.: No business is doing; prices are irregular and nominal. On track at Winnipeg about as follows: No. 1 hard, 75 to 77c.; No. 2 hard, 65½ to 67c.; No. 3 hard, 53 to 58c.; No. 1 regular, 46 to 48c.; No. 2 regular, 36 to 38c.

BARLEY.

The market is dull, and prices changing very little. From Oswego the report is that nothing is doing. Of Canadian barley there is an entire absence of receipts or shipments. Locally some barley has changed hands at 48c for No. 2, and 40 to 41c. for No. 3.

OATS.

There is a fair demand for oats, and the market shows some firmness. On the local markets mixed has sold for 32c. and white at 33c. on track. Oswego: extra No. 1, white, 44c.; Buffalo: No. 2, white, 35 to 35¼c.; No. 3, white, 34¼ to 34¾c.; No. 2, mixed, 33c.

PEAS.

Sales few: steadily held north and west at 59c. to 60c.

RYE.

The British consul at Bremen, in answer to a letter from a correspondent in this country, writing of the possibilities of increasing the trade between Canada and that city, has said: "There is only one article of note which is imported in some quantities from Canada, that is rye. Canadian rye, on account of its superior quality against the more light German and Russian qualities, is greatly liked by our bakers to mix with the latter kinds." Present trade is quiet and prices nominal.

BREAKING UP LOTTERIES.

A Montreal dispatch of recent date contains the information that "at the instance of the provincial government the proprietors of the People's and Montreal lotteries, both of which have been running here for some time and doing a large business, were arrested. The arrest of the ticket sellers throughout the city will follow shortly." The officers of the law in Quebec, backed up by the provincial government, are evidently determined to stamp out this lottery iniquity. Quebec is the only province in the Dominion where the lottery has been tolerated, and in the proceedings being taken against the proprietors of these concerns, exception is made of the "Province of Quebec Lottery," which has been in existence for a number of years, and to give the devil his due, is credited with always meeting faithfully and promptly all its obligations. The drawings are held twice a month and extensive prizes are awarded.

Hartney, Man., has already three elevators, and one, if not two others, is to be added this summer; a grist mill is also to be built.

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Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 12th of each month to insure insertion in the following issue.

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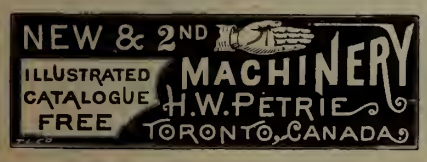

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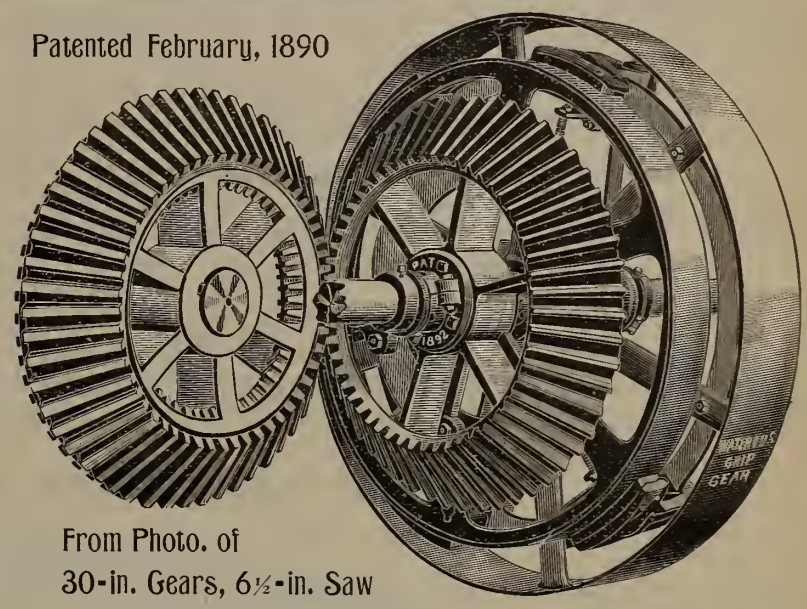

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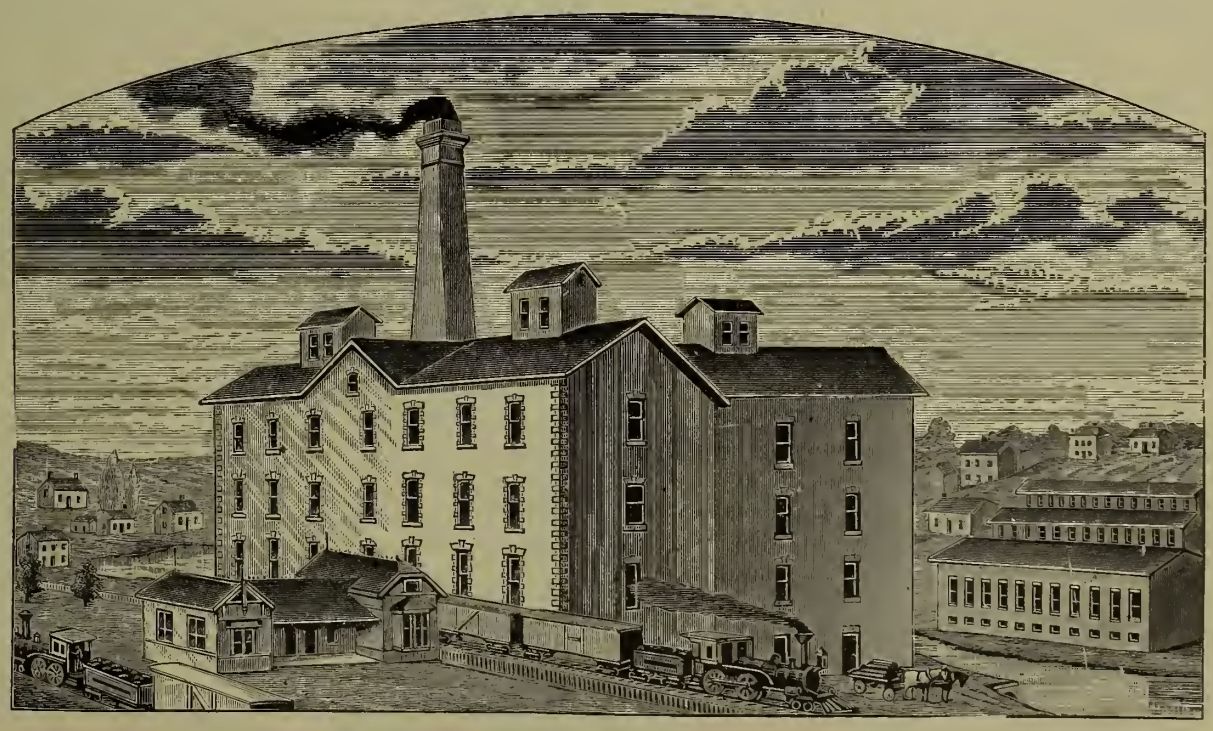

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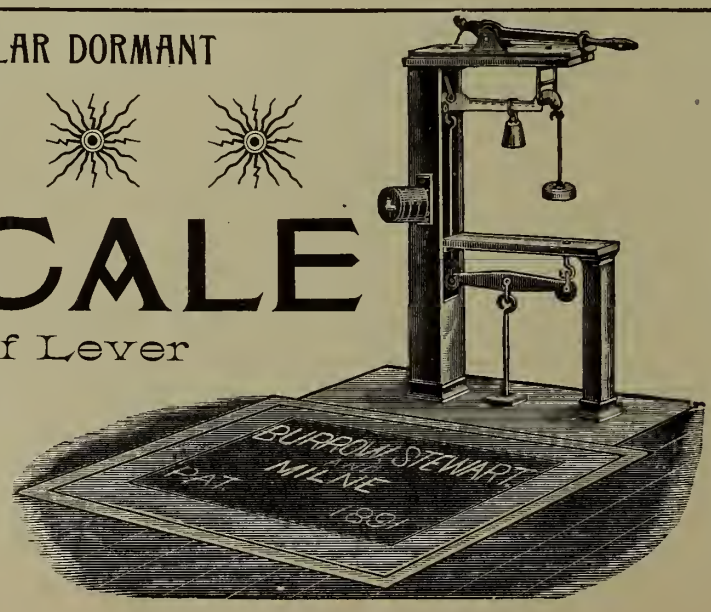

THIS SCALE is much cheaper than the Double Pillar Dormant, but is equal to it both in strength and accuracy. All the strain and leverage is centred directly on the pillar instead of bearing on the cap piece as in the two pillar scale, thus effecting a saving of two iron pillars and heavy cap piece required in the double pillar pattern. It has an advantage over double-pillar in that a Drop Lever may be used to let down the platform when not in use.

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NEW SERIES "MECHANICAL AND MILLING NEWS"

OLD SERIES, VOL. X. } NUMBER 6.
NEW SERIES, VOL. II. }

TORONTO, ONT., JUNE, 1892

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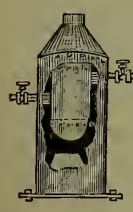

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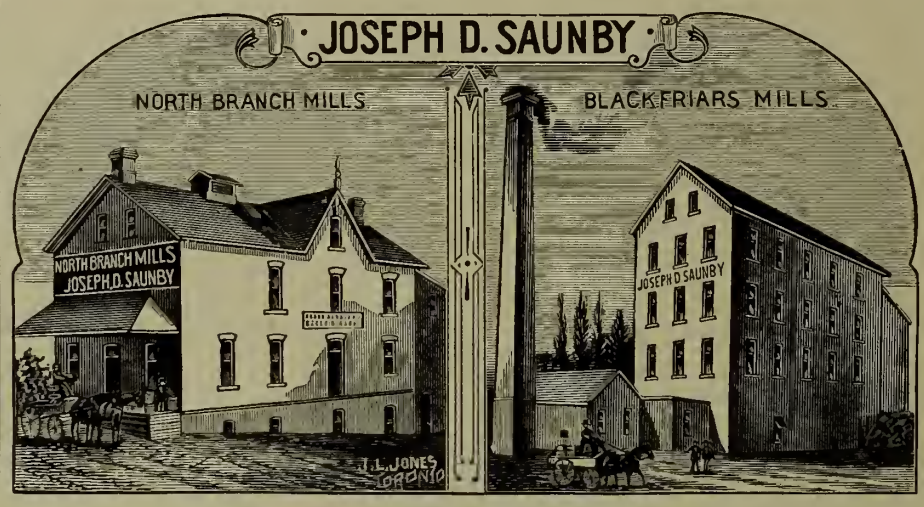

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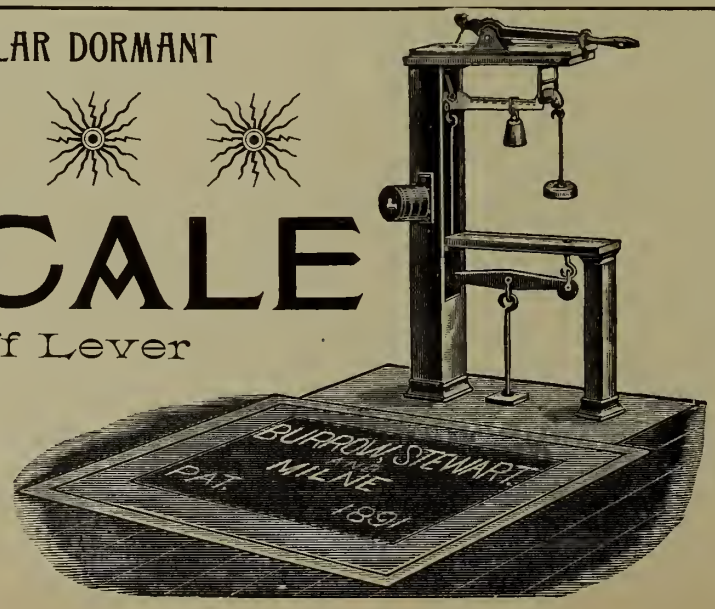
IMPROVED SINGLE PILLAR DORMANT
Warehouse or Hopper SCALE
With Cut-off Lever
With . or . without Drop . Lever

Improvement secured by Letters Patent, issued 28th January, 1891



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Old Series, Vol. X. } Number 6.
New Series, Vol. II. }

TORONTO, ONT., JUNE, 1892

{ Terms, $1,00 Per Year
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EPITAPH TO A MILLER.

HEERE a miller lyes,
Yt never lyed before.
(Ye honeste and ye wyse—
Wot ye, 'tis he heere lyes.)
Hys dustye raimente hath he dofft,
Yt worn it threescore yeare.
No more within ye floury lofe
He heaves, now yonne, now heere
Ye bagges of gryst so whyte.
No more ye bumpkin he doth floute,
Yt curseth hym with maine and might.
(Kynde saintes confuse ye eville lout!)
For yt hys gryste be lighte.
No more he picks ye stubborne stone,
Yt steadily goes rounde.
Ye mill it standeth heere alone;
Ye miller's gryst is ground.

SHADOWS PURSUED BY MILLERS.

IN the Miller, of London, Eng., Mr. W. T. Bates, whose writings are familiar to practical millers of both England and America, has an interesting paper under the above caption. He says: I am seriously of opinion there is a great deal of shadow-catching in the frequent changes of system that take place in many mills. Men of large experience know that this kind of thing requires great calculation, and that the possible effect of changing only one spout may be the thorough disorganization of that part of the system. Further changes often make confusion worse confounded, and reduce the system to chaos. This may happen with a man who knows his business fairly well, and he will have a difficulty in getting things again into equilibrium, but in the end his object—an improvement—will be gained. In the case of the tyro it is far worse, for he only flounders deeper and deeper in the mire with his successive changes. But then, to suggest that any man who has tended rolls, and especially if he has struggled successfully through one of the examinations, is anything less than an expert is to add insult to injury. I am not altogether unfamiliar with the works of some of these tyro experts. On getting charge of a decent mill he immediately sets to work to alter the system, and after having jumbled it up with scores of returns and other faulty details will, if asked whose system it is, coolly inform you that —— built it, but the "system" is his own! Of course it is not to be expected that —— having built several hundred mills should know so much about it as a youth who has actually worked in only one mill and probably seen no other. Some I have known had an excellent (?) method of making all flour, for when the offals happened to be rather good they turned them into the second break scalper! This is all very good for the tyro expert, but I have seen more than one diagram arranged by a professional expert in which there was no outlet for any offals except bran, and more than that, those mills were started to work in that form. Referring to the difficulty of keeping everything in a roller mill up to its proper standard, and the necessity I feel for constant watchfulness, I once asked a well-known mill builder how they got on with men of perhaps less experience and possibly less perspicacity? His answer was: "They don't get on at all, they are constantly sending to us to come and put them to rights."

I am afraid the shadows, of varying intensity, arising from circumstances similar to the above will visibly darken the flour, and also cast themselves over the miller's books, and not unlikely shade his brow, for these are shadows that allow themselves to be trapped.

In the early days of roller milling one shadow was persistently followed even by the best millers and engineers—and a real phantom it was too—that was a method of splitting every grain of wheat exactly in the crease so as to eliminate the "crease dirt." Many devices, more or less ingenious, were brought out to accomplish this result, as the successful performance of this operation was thought to be the very essence of milling. Even now we often hear similar opinions expressed by those generally who know least about it. Not a few stone millers, too, flatter themselves that if they only get a first break and a bran roll they can compete successfully with rollers. Poor fallacy! and reminds one of the Ashantees, who, when they saw the British soldiers stretching a telegraph wire from tree to tree, also put up a bit of cordage in a similar manner, thinking, doubtless, it was some "fetish." Stone millers had better keep their money in their pockets for all the good these machines will do them. Those who know most about roller milling have given up the pursuit of this shadow, having come to the conclusion that perfection lies least of all in these two operations, and essentially on those that go between, that is, the second and third breaks, for it is not in splitting the wheat and cleaning the bran, but in making good semolina, that the secret lies, and it is for this reason that stones can in no possible manner compete with rollers; for first break and bran rolls will not improve the flour, although they may slightly assist in improving the working of the mill. I would strongly advise stone millers to give up all these futile attempts to put themselves on a level with roller millers. Better by far to take care of their money until they are in a position to change altogether; and those who advise otherwise are assuredly not their best friends, for they only assist in prolonging their misery.

A very dark shadow, and one that will tantalizingly lure us into endless trouble, is the attempt to make good flour out of bad wheat, especially damaged wheat. I say "tantalizing," because it is so deceptive. We may to-day appear to be very successful and to-morrow flounder in the mire. The reason, of course, is that any wheat which is unsound must be unreliable. If it belongs to a good variety its inherent quality may overcome its outward apparent defects and give fairly good results; but if it should belong to any of the doubtful kinds, which, when sound, make only a medium quality of flour, we may look out for squalls when the salesman returns from his rounds. Milling this sort of wheat may enable the miller to produce flour at a low cost, but it is questionable if, in the long run, he will be any better off for it.

This leads me to the consideration of another shadow pursued, more or less, by many millers—that is, underselling. If "quality is the true test of cheapness," I am sure that flour made from faulty wheat, however low in price it may be offered, is not cheap, and will benefit neither miller nor baker. I am perfectly certain that success is wooed and won, not by selling an inferior article, or at a lower price than others, but by giving a sound, reliable article for a fair price—in fact, in giving one's customers a little more than money's worth in quality. By this I do not mean to say we should sell our goods at cost price, or without profit, but rather that a good article will command a good price, sell freely, and leave a fair margin for profit, besides building up a good connection, all of which can be done by a judicious selection of good wheat. This being the case, where is the necessity for producing a low-class article, or rendering one's own and other people's trade unprofitable by low prices? It is unquestionably true that the most successful millers are those who have made and maintained a good name for their flour rather than for the lowness of their prices.

A shadow which is very alluring and illusive is the almost general one of making the mill work above its capacity. I admit it requires some skill to do this with even a semblance of success, and it often happens that one man is unable to do more than seventy-five per cent. of what another can with the same mill, and not so good work either; but, as a rule, when machines are worked above their capacity there is little satisfaction to any one concerned. I consider mill builders are often in fault for overstating the capacity of machines. It would be far better to state a medium rather than maximum, but unfortunately it is seldom done, and yet it benefits nobody. The fault, however, which I now speak of—overfeeding—is the miller's entirely. As an excuse he argues that if he can increase his outturn he can thereby reduce his average per sack expenses, and thus, by selling at a lower price, do a larger business, which means, in other words, to give the baker the benefit of his increased output; so that really the only advantage to the miller is the employment of a larger capital for somebody else's benefit! But this is not all, for things do not always work out according to one's anticipations. It is possible to force the extra quantity through the mill, and to give the baker the benefit, but the whole thing may be done at the expense of quality and quantity, and result in a loss; for there will almost certainly be a reduced percentage of flour, and (unless exceedingly clever) deteriorated quality. Increased feed requires heavier pressure on all rolls, and almost certainly coarser silk in some situations. Now whenever we put heavy pressure on rolls we begin to get heat, the bearings get hot and the belts slip. Heat and slipping belts lead to chokes, and chokes to waste, this in itself is a source of loss, but the variation in quality, under these conditions, is a far more serious matter. There is no doubt that everything will do the best work when worked at its normal capacity, and this applies to rolls, purifiers and silks, but more especially to the former, for heavy pressure is fatal to good semolina and granular flour.

There are many shadows of different intensity which attract the milling enthusiast in the pursuit of his ideal. I remember that I once thought I was on the trail of a good thing when I divided the chop on every break up to the fifth. I argued to myself that the smaller particles of second or third break chop required closer contact with the rolls than the larger, and that to do the finer properly (when mixed) the larger would be overdone. But I quickly discovered that there was absolutely nothing in it, that it was only a shadow, or alluring will-o'-wisp, and that more harm than good was caused in its pursuit by the excessive handling of the products. Moreover, I satisfied myself that anything of the same thickness would be acted upon alike, especially on finely grooved rolls. It is scarcely necessary to state this, perhaps, but it is a fact that very fine middlings, when mixed with bran and passed through bran rolls, are turned to flour in the operation. This being the case, it is, I think, the best and most expeditious method of working off all coarse tailings through the bran rolls and bran duster rather than, as is often done, through smooth rolls and silks, as the offals are far cleaner and better finished. It may be argued that there is greater danger of discoloring the flour thus, but I do not think so. Besides, I find that lively stuff of this kind helps the otherwise soft bran product to dress, and in any case it is nearest in quality to the bran flour. Of course, if the latter is to be drawn off as a separate product, it might then be advisable to keep it distinct. If the tailings are fairly hard and good it is best to treat them first on the fourth, or last but one, break, and keep the product, which will be fair middlings, for separate treatment.

THE MYSTERY.

A WRITER in an engineer's paper properly says that when old grate bars, scrap iron and similar weights are hung on the safety-valve lever (to prevent the valve working at the proper time), there is always a deep mystery connected with it—and that mystery is, what prevents an explosion?

Pressure of other matter has crowded out this month our usual "Character Sketch" and portrait.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

SETTLED.

THE story of locking the stable door after the horse has been stolen is familiarly quoted often to illustrate the foolishness of man in resolving on a wise course after many of the benefits that would have come from such a course have been secured by some one else. We do not desire to apply too strictly the principles that underlie this illustration to the case of Newfoundland and Canada in accepting at the eleventh hour the modus vivendi proposed the early part of the year as a settlement of the tariff troubles between the two countries. The mill cannot grind with the water that is past, and now that the contention between these countries has been settled it is useless to spend one's energies in repinings of what might have been. It is perfectly true, however, that this eleventh hour action just as effectually shuts Canada out of the larger part of this season's flour trade with the island colony, as it is true that it is the running water, and not that which has lost its power, that is of service to drive the mill.

On the principle that all's well that ends well, we rejoice with the country generally that even now these difficulties have been amicably and satisfactorily settled. We are not forgetful either of the fact that there has been a broader view than the one of trade only to consider in reaching a finality on this question. Matters of serious international import have no doubt been at peril in an adjustment of these troubles, and a Government must under these circumstances take a firm and dignified stand, moving not a jot or tittle to the right or left. We come back, nevertheless, to the one position taken by the MILLER throughout this discussion, that the dignity of neither Canada, Great Britain nor Newfoundland need have suffered, nor the relations of any been complicated, by the adoption of the modus vivendi at the outset of the negotiations. The trade which has been lost by the delay might by this course have been held for this season. It will be a relief to our millers all the same, though immediate trade is curtailed, to know that the Newfoundland market is still open to them.

GRAIN VIA CANADIAN CANALS.

A strong and constantly growing interest is being manifested in the canal and waterways system of this country. Concerning one phase of the question the American Elevator and Grain Trade Monthly, of Chicago, has the following to say:—

"The discrimination by the Dominion Government in levying tolls on the Welland Canal is causing considerable ill-feeling and discussion. Grain shipped from the west to Montreal for export, via water, must necessarily be transhipped from lake vessels to river barges at some point on Lake Ontario. At two points only are facilities provided, Kingston, Ont., and Ogdensburg, N.Y. To reach either of these points grain must pass through the Welland Canal, where the Dominion Government levies a toll of twenty cents per ton. If transhipped at Kingston, where the facilities are inadequate, a rebate of eighteen cents per ton is given. If transhipped at Ogdensburg no rebate is given. It is clearly a discrimination against an American port and the Interstate Commerce Commission has decided that it is a violation of the canal clauses of the Washington Treaty, and recommended as a measure of justice that the Sault Ste. Marie Canal should no longer be open to Canadian vessels. It has also been reported that the president would advise Congress to take such action. The discrimination is, without doubt, an unjust one, but closing the Sault will not help matters in the least; the Dominion Government would reciprocate by closing the Welland to American vessels, which would further embarass our export grain trade and serve to advance the interests of the New York elevator pool. Free passage through Canadian canals for all vessels is necessary for the encouragement of our export grain trade via Montreal, but a tit-for-tat policy is not the one to use in obtaining it, or passage on equal terms either.

It is to the interest of the export grain trade of both countries, and greatly to the interests of Montreal dealers and handlers that everything be done to induce the grain to seek that route. The proposition that an agreement be made between the two countries whereby the Welland and St. Lawrence Canals shall be deepened and free passage given vessels of citizens of either country is worthy of every grain shipper's support; the one of retaliation is not.

By deepening these canals a shorter route to the United Kingdom would be obtained, and the ocean-carrying trade would be thrown into the hands of Canadian and American companies by levying prohibitive tolls upon vessels of other countries. The exportation of grain would be facilitated, shipments expedited, freight reduced and the New York elevator pool be made harmless for at least eight months of every year."

EXPORTERS' TROUBLES.

Efforts to create a more efficient transportation service between America and Great Britain is not being confined to millers in Canada and the United States. The trades of Great Britain are organizing to remedy the bill of lading trouble as far as it is possible to do so from that side of the ocean. A petition, from the Glasgow Corn Trade Association, has been presented to Lord Salisbury, prime minister, drawing the attention of the Government to the anomalies of present arrangements and asking for legislation, or a royal commission of enquiry in the matter.

It is pointed out that the food supplies imported into Glasgow—as the principal distributing point in Scotland—during 1891 amounted to £4,750,000, of which flour formed a most important part. The petition recites the gradual transfer of flour carrying from sailing ships of many owners to steamships belonging to a few well-known companies or firms, who easily combine to evade liability, and asks that some reasonable constructions shall be put, by British law at all events, upon the condition and outturn of food products arriving in this country.

Not without some ground for the impression these Glasgow millers entertain the idea that the millers of the United States are lacking in force and influence, or need of better organization, else some remedy of an effectual character would have been applied before to-day.

Adding only another to the many cases that have occurred, and are continually occurring, both among United States and Canadian millers, the Northwestern Miller recites the history of shipments of flour made by a Minneapolis milling firm November 30th, their destination being Bristol, England, the goods to go by the Bristol City line, via New York. The shipment was complete at New York on December 28, but for some reason, for which the company could not account, did not go forward. The attention of the steamship agents was repeatedly called to the delay, but no satisfaction was received until March 12, when the owners of the property were informed by the steamship company that it was only notified on March 1 of the arrival of the flour at the seaboard. The statement was at that time made that it would go forward March 18, but it did not leave New York until April 8, making a delay of 101 days after its arrival complete at New York.

What to do? is the conundrum apparently with exporter and importer. The latter, as is shown by the action of the Glasgow association, is not idle. The United States millers are doing something. The Millers' Tracing Bureau of the United States National Association has, thanks largely to the energy of Secretary Barry, accomplished good work. It has not by any means, however, nearly overtaken the evil. Canadian millers have had the question before them at every convention for years and they have not neglected to bring pressure upon the railway companies of our own country. Individual and isolated action is not going to overcome all obstacles. We believe that the millers of both Canada and the United States should go into this question jointly. In many respects the points are of mutual import and a more complete solution of the difficulty will be reached by an all round action on these lines. Now that our Dominion Millers' Association has been incorporated Canadian millers are able to make a move that will carry with it greater effect and force.

THE CARRYING TRADE.

Methods of transportation are so essential to the progress of a country that it is not surprising to find our shrewdest business men and ablest engineers giving their best thoughts to this one question. The necessity for enlarged plans presses upon all engaged in commercial pursuits in proportion as the manufacturing capabilities, and, above all, the agricultural resources, of the country, are developed. Even with the advances that have been made in this line of late years, including the increased equipment of the Canadian Pacific railway, and the additional efforts by its competitor, the Grand Trunk, to meet immediate requirements, the extra wheat crop of the past fall showed how wholly unprepared we are to meet any unusual demand on the carrying trade of the country. Emigrants by the thousand are teeming into the Northwest this year. With hundreds of additional acres under tillage in a short time, how is the product to be removed unless new and larger carrying outlets are discovered?

This pressure upon the carrying resources of the present day is being felt just now as severely in the United States, with all their immense network of railways and systems of waterways, as in any other part of the continent. Relief is being sought by improvements in their ship-building, illustrated in the construction of the whaleback steamers, which seem destined to occupy a serviceable place in the carrying machinery of the country.

Mature planning is being given to the development of the waterways of this continent as the great solvent in this case. The railway systems, perfect and extensive though they be in Canada or the neighbouring republic, are limited in their powers to meet the needs of either country. Enlarged and more perfect ship construction will help, but the best of vessels are little else than white elephants to their owners, without the waterways into which to place them.

The assistance, that is so devoutly needed, is to come, it would appear, through a development and extension of the waterways of the continent, and in this connection Canada holds a position of especial vantage. The United States have recognized this in the propositions that have been discussed in Congress looking to the making of our canal system the medium of a great waterway through to the seaboard. In Scribner's Magazine a few months ago an article of considerable length and undoubted merit, entitled "The Water Route from Chicago to the Ocean," was printed. There is given a very complete history of the canal system of Canada, embellished with numerous illustrations and maps showing the locks, bridges, and various views of the Welland and St. Lawrence Canals, and, of course, telling the one story that a water route from Chicago to the ocean is a route in which the waterways of this country hold the coign of vantage. Little doubt can exist that it must only be a short time when the unexceptional position held by Canada in this matter will become a source of unusual wealth and power.

Another project that when carried through must make a further valuable addition to our carrying trade is the building of the Ontario Ship Railway. A fortnight ago a public meeting was held in the city, when Mr. David Blain, the provisional manager of the company, entered into a history of the scheme and an explanation of the measures that were necessary to be taken to carry it to completion. Thirty years ago Mr. Blain began to consider the possibility of diverting the freight traffic of the

upper lakes from Buffalo to Toronto. At that time he did not propose building a ship railway, thinking that a canal could be built. The difficulties of construction, however, were found to be so great that the measure was abandoned. It was not then supposed that human ingenuity could ever devise a plan that would lift a vessel out of water and put it back again without injury. Now it is known that such a project is not impossible.

In 1874 Mr. Blain, still favoring the diverting of the upper lake traffic from the American side to Toronto, in conjunction with other capitalists, caused a charter to be issued for a double track air line railway, which would, if the freight were transferred to it at the Georgian Bay, save a distance of 300 miles and twenty-four hours of time in the journey to tide water. Toronto in this way could be made the harbor for the upper lakes freight.

As illustrating the extent of territory depending upon the great lakes routes for an outlet let an imaginary line be drawn through St. Louis and one will find that all the great wheat and cattle-producing country to the north of it came to the lakes. Briefly, the claim is that the proposed railway would tap the greatest amount of freight to be found in the world, reaching the enormous proportions of 25,000,000 tons per year.

There can be no gainsaying the importance of a commercial route purporting to establish the necessary "link in the chain of commerce between the Northwest and the Atlantic seaports and Europe." To the grain trades it would prove an inestimable boon, and in so far as it is believed the Huron Ship Railway project will accomplish this purpose, these trades are peculiarly and specially interested; this, aside from their interest in the project as citizens of the Dominion, concerned in the general welfare and prosperity of the country.

MARKET CONDITIONS.

At all points the story of the flour trade is one of quietness. The British market continues unsettled and, in a measure, congested. St. Louis trade is embraced in the words, "lifeless and unchanged." In Milwaukee matters are rather firmer. Minneapolis mills are running largely on old orders, fresh orders coming a good way short of squaring with the production. The word in our own country is no more hopeful, so far as the present is concerned. A more cheerful spirit, however, permeates the trade now that the Newfoundland embargo on flour has been removed. Our millers will be able to secure a fair share of business from this colony for the fall. In millstuffs generally trade is as dull as in flour.

PRICES OF FLOUR AND MEALS.

Quotations at leading market centres are as follows:—

Toronto: Millers' Bulletin says: "Few sales reported. Straight grades, $3,90. Patents at $4.95 to $5.05 per barrel, f.o.b. for Lower Provinces. Bran $11 and $12. Shorts, $12 and $13.25 per ton, f.o.b." Oatmeal is inactive, bran is slow; millstuffs all round weak.

Montreal: A small business with Newfoundland has been done since the settling of the trouble. Export trade on the whole is dull. Sales have been made at the following prices: Straight rollers, $4.25 to $4.50; winter wheat patents, $4.50 to $4.65; spring patents, $4.80 to $4.85; extra, $3.50 to $3.65; superfine is quoted at $3 to $3.25. The market for oatmeal continues quiet. Prices of meals are as follows: Granulated, brls., $3.90 to $4, in bags, $1.90 to $2; rolled oats, brls., $3.80 to $3.90, in bags, $1.90 to $2; standard, brls., $3.75 to $3.85, in bags, $1.75 to $1.80; split peas, brls., $3.50 to $4; pot barlev, brls., $4 to $4.40; pearl barley, No. 1, brls., $7.25, No. 2, $6.25, half brls., $6.75, pockets, 2x, $2.80; rolled wheat $2.65 to $2.75. Millfeeds are dull.

Winnipeg, Man.: No new feature in the local market. Prices are quoted as follows to the local trade in small lots per 100 pounds: Patents, $2.40; strong bakers', $2.20; second do., $1.80 to $2.00; XXXX., $1.20 to $1.30; superfine, $1.10 to $1.15. Bran, $10 per ton; shorts, $12; oatmeals, rolled and granulated, $2 to $2.10 per sack; standard oatmeal $2.05 per 100 lbs. Cornmeal, $1.60 to $1.70 per 100 lbs. Split peas, $2.60 to $2.65 per 100 lbs. Beans, $1.65 to $1.75 per bushel. Pot barley, $2.65 to $2.70 per 100 lbs. Pearl barley, $4.25 to $4.30.

Office of the CANADIAN MILLER,
June 15, 1892.

THE GENERAL SURVEY.

ONLY a meagre business has been doing on any of the grain exchanges of the country during the past month. An occasional spurt in prices has taken place casting a ray of sunshine into the camp of the bulls, but these conditions have not been enduring. The long and the short of it is, grain trade is dull and seems likely to keep this way for some time. In Britain there is practically no demand for our wheat; the Britishers have indeed been selling wheat for shipment to France. How different the actual situation is to-day to what was anticipated by many in the fall of last year. One thought alone was then kept to the front by many—the remarkable short crop of European countries. Added to this, and following as a consequence, was the Russian edict prohibiting the exportation of wheat from that country. Six months have shown that the wheat crop may be a failure in not a few important wheat-growing centres and yet the world's supplies need not necessarily be seriously impaired.

No small measure of concern centres on the prospects of the growing crop. The continued damp weather, which has been the rule almost everywhere in Canada and the United States, has made seeding late at nearly all points. In the western States floods have caused still greater harm. The spring wheat seeding is reported in the States to be fairly well forward, but a smaller acreage is sown than last year. What will be the outcome in the winter wheat field will depend a good deal on the weather for the next month. If there is a further wet spell the crop will necessarily become depreciated. With fine weather following the present damp season growth will be rapid and, if not too rapid, healthful. The immediate outlook, however, in these respects is doubtful.

In Ontario about as much wet weather has been experienced as anywhere else, and kept the season back with the untoward effect that is to be expected. Manitoba and the Northwest will show an increased acreage this year over last, and weather conditions are not reported as having seriously affected the outlook in wheat as it appears to-day. Farmers are hurrying through their seeding in order that they may get at threshing, a large part of last year's crop still waiting the thresher.

Few discouraging reports come from Europe and the Eastern continent. The India harvest turned out well, and North Africa, that is now harvesting, promises well, so that it can hardly be said that the crop outlook as yet favors the bulls. Europe does not appear in sore need of our wheat, and even if weather conditions on this continent have been against a possible large crop, yet we have supplies enough from last season to level up a considerable shortage, though it is premature to talk of shortage from anything we now know.

The following is a comparative statement of the visible supply of grain in Canada and the United States, as prepared by the secretary of the New York Produce Exchange at June 6:—

	1892.		1891.	
	June 6. Bush.	May 30. Bush.	June 8. Bush.	June 1. Bush.
Wheat	27,910,000	29,448,000	16,477,405	17,492,723
Corn	4,478,000	3,696,000	5,606,887	5,153,738
Oats	3,369,000	3,175,000	4,549,391	4,243,566
Rye	450,000	611,000	304,859	335,271
Barley	411,000	371,000	146,274	179,767
	1890.		1889.	
	June 9. Bush.	June 2. Bush.	June 10. Bush.	June 3. Bush.
Wheat	21,791,337	22,451,931	18,892,181	20,205,861
Corn	14,214,009	12,685,271	12,202,237	11,607,931
Oats	6,167,955	6,050,732	6,333,310	6,335,032
Rye	586,811	605,489	365.625	498,535
Barley	697,400	712,708	1,067,239	1,103,450

WHEAT.

Prices at time of writing are as follows:—American: Chicago: June, 84½c.; July, 84¾c.; August, 84¼c. New York: Red, 98⅝c. to $1.00½ afloat; ungraded red, 84¼c. to $1.00¾; No. 1 Northern, 91⅜c. to 92¾c.; No. 1 hard, 95⅜ to 95⅞c.: No. 2, Northern, 86½c. to 87¾c.; No. 2 Chicago, 91c. to 91⅛c.; No. 2 Milwaukee, 90⅜c.; No. 3 Spring, 85⅝c. to 85¾c.; No. 2 red, June, 90¾c.; July, 91⅞c.; August, 92⅜c.; September, 92½c.; December, 95c. St. Louis: 87c. for cash; 86c. for June; 84¼c. for July; 82½c. for August. Duluth: No. 1 hard, 86c. for cash; 87½c. for June; No. 1 Northern, 83⅓c. for cash; 85c. for June. Canada: Toronto; Red and white, 81c. and 82c.; spring 80c. to 82c.; No. 2 hard, 88c.; No. 1 hard, June, $1.00; No. 2 hard, 95c.; No. 3 hard, 84c. Winnipeg, Man.: No. 1 hard, $1.01; No. 2 hard, 94c., 95c.; No. 3 hard, 85c.; No. 1 Northern, 95c.; No. 2 Northern, 84c.; delivered at North Bay.

BARLEY.

A section of the brewers of the United States continue their agitation for a reduction of the duty on Canadian barley. They say they must have our barley. But the brewer, notwithstanding, the duty remains, and now that the presidential conventions are being held no tariff changes need be expected this side of the contest for the White House. The London correspondent of the Globe writes that there is a good market in Britain for two-rowed barley providing it is of good quality. "If Canadians," he says, "like to throw themselves into the business in a proper spirit and bestow due care upon it, they can undoubtedly ensure getting a top price in the English market for every consignment of really fine malting barley they can send, but it is absolutely essential that several conditions overlooked in the past should be borne in mind. In the first place it is very desirable that the barley should be graded like wheat, so that thorough and undeviating uniformity of quality can be secured. In the second place much more scrupulous attention must be paid to contracts. Thirdly, growers should invariably allow the grain to become fully ripe prior to cutting. They should keep it in the stacks a month or two to "sweat" before threshing, and they should be careful to use only the best varieties of seed and should look after the land well." Dullness has ruled the market during the month, both locally and across the border. Sales of good No. 3 are recorded here at 40c.

OATS.

The opinion has been expressed that oats have touched as low figure as will be known this season. At present at any rate prices are firm, with a fair demand. On the track at Toronto mixed have sold for 34 to 34½c., and white at 34⅓ to 35c.; outside purchases 31 to 32c.

PEAS.

Rather more life has been shown in peas. Purchases north and west in one and five car lots have been made at 60c.

RYE.

The trade in rye is nominal and prices the same.

SHORTS AND SHIPSTUFF.

When a roller mill has the bad habit of ringing—material sticking to it in rings all the way round—it is a sure sign that the brushers or scrapers are not properly performing their work.

The long and short sellers and buyers originated in the Bible. In Proverbs xii. and 26 is found: "He that withholdeth wheat the people shall curse him: but blessings shall be upon the head of him that selleth it."

The only way to get rich by your own exertions is to save a part of your earnings. If you spend all you make you will forever be poor as you are at present. And if you spend more than you make you will be in debt world without end.

You know, my boy, the Bible says that you must always do to other people as you wish to have them do to you. Send us a dollar for THE CANADIAN MILLER and we will send you a hundred dollars' worth of good solid information before the robins nest again.

With the round or centrifugal reels every inch of the cloth is constantly employed in receiving and executing an equivalent amount of work. Hence no part is overtaxed while another part is idle. Hence meshes are equally worn and retain a perfect uniformity of size to the end of a long life.

Two famous philosophers—Menedemus and Asclepiades—when pursuing their studies at Athens, were enabled to pay their schooling by acting as millers after school hours, receiving the munificent sum of 36 cents (2 drahmae) per night. Happily their fellow-students, on hearing this, raised a subsription sufficient to defray the expenses of these deserving men.

A POOR GIRL WINS $15,000.

The Province of Quebec lottery continues to pursue the even tenor of its way in no manner molested by the officers of the law, who are fast cleaning out the People's and other lotteries that endeavored to secure a foothold in Quebec. The Provincial Government makes an exception in the case of this particular lottery and extends to it the protection of special legislation. On May 4 a drawing took place when the capital prize of $15,000 was won by Miss Mary Donovan, 113 Dufresne Street, Montreal, Quebec. In this case Dame Fortune was not blind. Miss Donovan belongs to a poor but highly respectable family. The father, now dead, was one of the good parishioners of Reverend J. J. Salmon, parish priest of St. Mary's Church, Craig Street, who takes pleasure in recalling the merits of this good man. The mother, left a widow, depended mostly for a living on her daughter's daily labor.

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

INCORPORATED.

THE Dominion Millers' Association has been incorporated; the special bill before the Dominion Parliament practically becoming law a week after the issue of the May MILLER. The measure was fully discussed by the Banking and Commerce Committee, Mr. Stevenson, M.P., for Peterboro, diligently and intelligently, representing the interests of the millers. Secretary Watts appeared before the committee at its final session and fully explained the objects sought for by the association. The impression, and in this age of combines not an unnatural impression, had obtained hold of Mr. Cochrane and other members of the committee that, in seeking powers of incorporation from Parliament, millers had an ulterior purpose leaning in the direction of a combine to raise the prices of flour and grain. It was not a difficult matter to show the committee that no such plan was entertained by the promoters of the bill. If that was the object, as Mr. McKay, M.P., pointed out, millers, if they wished to regulate prices, could do that already.

An altogether different thought has been uppermost in the minds of Canadian millers. For years they have seen their business handicapped because lacking the cohesiveness and influence that would be conferred upon them if, as other commercial bodies, they were a properly constituted organization by Act of Parliament. The desire was to extend and enlarge the business facilities of the millers of this country, and they could not do this without adding to the prosperity of the country as a whole. "The association," as Mr. Watts expressed it, "did not desire to buy or sell grain, but simply to bring the producers in closer connection with millers, and millers with consumers."

Other business ends will be accomplished by the association which, as the experience of the past proved, was not possible as an unincorporated organization. Prominent among these will be a recognition by the Government of the status of the miller when making appointments to the boards which fix the standards of grain and flour. This much has been promised by the Department of the Interior.

It may be expected that as an incorporated body the association will take steps to overcome the difficulties to foreign trade that are caused by the constant and annoying delays at the seaboard. We have somewhat frequently, and last month referred at length to this question, and in the MILL PRODUCTS department this month follow up the subject. Incorporation will have accomplished an inestimable service to the milling industry if, by means of a tracing bureau or other workable plan, this obstacle is removed.

The important object of incorporation is to give increased momentum to the export trade in flour and mill products. We cannot consume in Canada the full output of our mills and it is all essential to succesful milling that satisfactory outside markets be secured. This result will be best attained by enabling the association, as an incorporated organization, to place an agent or agents in foreign markets, a programme that cannot be properly carried out by the individual miller.

With the one amendment of making the possible holdings of real estate $5,000 annually, in place of $10,000, and an addition of the following clause to the bill defining the objects of the association, which was quite agreeable to the members, it was passed as originally drafted by the association:—

But nothing herein contained shall be construed as constituting the said association a trading company or empowering them to engage as a trading association in the business of buying or selling grain, flour or other merchandise, nor shall the said association by rule, regulation, bylaw or otherwise fix or determine or endeavor to fix or determine in any way whatever the price that the members or any of them shall pay or offer for grain in Canada.

Toronto was named as the headquarters of the association.

MICHAEL DAVITT ON CANADIAN EMIGRATION.

THE Dominion Government might do worse than print for general distribution in Great Britain, in the interests of emigration, the important article on the Canadian Northwest from the pen of the celebrated Irishman, Michael Davitt, published in a recent number of the Nineteenth Century. Residing in this section of Her Majesty's domains, without that perspicuity of knowledge that comes from residence on the spot, we have perhaps pictured Mr. Davitt to ourselves as an unyielding obstructionist, and one whose sentiments and attitude towards the British Empire was none too loyal. The story of life in the Northwest and the enthusiastic appeal he makes to his countrymen of England, Ireland and Scotland to people that land, which he thinks is destined to supply the motherland so abundantly with wheat that the English market will become "less susceptible to the influence of American grain rings and dealings in futures," will in a large measure dispel this notion. He has no sympathy whatever with any suggestion pointing to the annexation of Canada with the United States, being of the opinion that already the States has more territory than its rulers can satisfactorily govern.

Mr. Davitt writes from personal observation made during a tour of the Northwest and British Columbia last fall. He gave himself time not only to observe, but also to carefully and, as his article shows, accurately study the country, its conditions and possibilities, and the manner and customs of the people. There is no mistaking the fact that Mr. Davitt was charmed with the country, and particularly with certain sections of British Columbia, and seldom, if ever, has its beauties and grandeur been pictured more eloquently and, at the same time, with wonderful exactness and comprehensiveness, than in this Nineteenth Century article.

Mr. Davitt is as shrewd as he is eloquent in his observations. Knowing as a Britisher the view of Canadian emigration, and of our country as a field for emigration, that is entertained by the people in the old country, he has not been slow to act the part of the wise critic, while giving the country the praise he considers it merits. He points out the harm that has been done to Canada in having it repesented by "a female always clad in furs and living in a land of snowshoes and ice-palaces." Referring to his own knowledge of conditions he shows that our climate is no more severe than that of Minnesota, the Dakotas, Nebraska and many American states, but as he intimates, one does not find the clever Yank proclaiming broadcast to the world by picture and type the data furnished by the thermometer for the coldest day in the year. Moreover, Mr. Davitt states fairly and intelligently, that the climate of Manitoba and the Northwest is not in any sense objectionable because of severe frosts. True, Manitoba is not the home of the banana and the fig tree, but the climate nevertheless is most delightful, and what severity may at certain periods exist will become modified as the country is settled and the tillage of the land extends. We have on other occasions pointed out in these columns that it is time that our pictorial artists, whether of brush or pen, had banished the ice-palace, the wolf, the bear, and the paint and feathered Indian; too, from their sketches of life in Canada.

We have said that Mr. Davitt has shown himself a shrewd observer. This is indicated in his observation that the Northwest has no need for the English emigrant with a "small capital" who has little brains and less love for labor, and, dressing himself in cowboy costume, rides about on an Indian pony all day, tries to teach the Cockney way of spelling Manitoba, plays cards and gambles all day and night.

These are the men who tire of the country, because they have not tasted of its sweets by their own labor, and returned home again, only to give it a bad name. A little capital will not be amiss to anyone who decides to settle in the Canadian Northwest, but it is useless without the addition of pluck, determination, and a disposition to use both hands and brain.

Mr. Davitt's article abounds in common sense observations that have a lesson for the people of Canada and Great Britain.

PURSUING A PHANTOM.

IT took only two minutes to ruin Coster & Martin, the big corn manipulators of Chicago, a fortnight ago. This is the cold reading of the associated press dispatch. The story is the old one of gambling in grain and getting left, only it took less time than usual to effect the ruin.

These two men believed that they had the corn situation in the palms of their hands. One dollar a bushel was demanded by them for May corn, this the last day in May. There was no lack of buyers, and no such an amount of trading in corn at one dollar a bushel was ever known in the history of the Chicago Board. But the suddenness of the change was appalling. Within two minutes the price dropped from one dollar to fifty cents a bushel, and Coster & Martin were ruined. The market closed at fifty-five cents.

There is no business in trading of this character, and few can spare a tear over the ruination of men who are ruined in this fashion.

We have had a diminutive Coster down among the Bluenoses, who in the quiet little village of New Glasgow, N.S., planned a gigantic flour corner for his own supposed emolument. This man, Dalrymple by name, conceived the idea in February last, that as wheat in Chicago had declined from $1.10 to 90 cents a bushel it was a favorable time to buy up a quantity of flour, which in his opinion had reached bed rock, and it would not be long before it would commence to stiffen and steadily increase in price. He proceeded to form a syndicate and purchased of Ontario millers 25,000 barrels of flour, securing from the millers a commission for the sales effected. The sales were made to F. A. Ronnan & Co., of Halifax, shipments were to be addressed to Halifax, via Boston, and settlements were to be made by draft in the usual manner on the arrival of the flour. Dalrymple to the contrary, wheat declined from 90 to 80 cents and flour prices became correspondingly demoralized. The transportation companies were loaded up with the shipments and wanted to know something of their disposal. Dalrymple saw that his little game was up and he left for Chicago with $1,000 commission in his pockets. The millers who had shipped the flour were not long in discovering that they were in the soup. Two or three of them have instituted suits against Frank A. Ronnan for breach of contract.

In the meantime Dalrymple entered the Chicago wheat pit, prepared to clean out Partridge or any other grain king who came in his path. Five days were sufficient to relieve him of his $1,000, and once more a poor man he returned to Canada, and at the present time, report says, he is ill of typhoid fever at his father's house at Lakeside, Ont.

We are sorry for the honest dusties of Ontario who have been let in by this rascal, and only hope the loss will not total up as large as at first seemed probable.

In another column we publish a practical article from an English milling journal entitled "Shadows pursued by millers." This world is seemingly peopled with men who are constantly pursuing some kind of phantom. They expect that somehow or other the phantom will don material clothes and not evade their grasp, but more frequently the phantom remains a phantom, a strange, mysterious creature, as difficult to reach as the rainbow that in childhood days we chased and chased,

to be as far away from it at the close as at the commencement of the journey.

Perhaps it is employing language wanting in force and vigor to say that Coster or Dalrymple were only employed in the innocent occupation of chasing a phantom. Sharpers though they had proven themselves, it is this ambition of the age of trusting to one's wits for a living that creates our Costers and Dalrymples.

How men hate work!

EDITORIAL NOTES.

As evidencing the correctness of the old saw, that every rule has its exceptions, the following case, in contradistinction to the general experience, shows that railroad dispatch is not an impossibility. Norris & Carruthers sold a round lot of Manitoba wheat to be loaded on the steamer in Montreal June 7. The shipment left Fort William by the C.P.R. steamship Alberta on June 2, arrived in Montreal and was loaded June 7. The grain should be in Liverpool on June 15, or thirteen days from Fort William.

THE Commercial, of Winnipeg, Man., is agitating for the establishment of a public grain elevator to facilitate the handling of grain at that point. Much of the trouble about getting wheat through to the seaboard has been due, it states, to the lack of proper facilities at Winnipeg. "Grain shipped eastward," says the Commercial, "from all parts of the country, converges at this point. A large handling elevator here would enable shippers to forward their wheat to Winnipeg from their different buying stations and make it up here into export lots of straight grades, before shipping eastward. Shippers cannot make up export lots of straight grades at country buying points, but if there were a public handling elevator at Winnipeg, they could ship here from a number of country buying points and thus make up export quantities here of the different grades, as required." Besides it is alleged that freight is paid on tons of dirt sent with wheat.

THE annual report of the Canadian Pacific railway is a document peculiarly gratifying to the shareholders. It reports a surplus of $3,345,166, and in a substantial manner supports the glowing picture of prosperity by an allotment to the shareholders of two supplementary dividends of one per cent. each. Not any one circumstance alone has contributed to the splendid success that has attended the management of this Canadian road, but President VanHorne is not slow to give his meed of praise to the augmentation of profits that has resulted from the extensive grain carrying trade of the past year. In this connection he said: "A large amount of grain yet remains in the hands of the farmers in Manitoba, as well as in Ontario, and the outlook for traffic for the present year is unusually good. . . . The company's grain elevators and lake steamers have helped to swell its profits. To meet the requirements of the increasing production of grain in the northwest an additional elevator of 1,250,000 bushels was erected at Fort William, making the total storage capacity at that point and Port Arthur 4,000,000 bushels."

THE people of St. John, N.B., are not in the best of humor in a knowledge of the fact that 750,000 bushels of grain passed through that city last winter on its way to Halifax for ocean shipment. The St. John Telegraph, which has been devoting some attention to the subject, has this to say: "Why did this grain not stop at St. John, the nearest Atlantic port in Canada, instead of going 275 miles farther to Halifax? The answer to this question must be that St. John has no facilities for the shipment of grain; it has no elevator for the storage of grain, and, therefore, the grain that ought to have been shipped here went past this port and on to Halifax." Figures are given in order to prove that the difference between shipping grain on the St. John harbor and sending it on to Halifax was eighty cents a ton. As the distance of extra hauling being 275 miles, it is shown that there was a considerable concession granted by the Intercolonial Railway. It is therefore clear that other conditions being equal, there is a waste of freight charges by St. John not being the shipping port for this grain; more than sufficient would be saved to give that place the preference if other conditions are as favorable.

"LOCAL trade is very dull," said Treasurer Galbraith, of the Dominion Millers' Association. "The season throughout has been dull, and we can hardly expect any life now before fall. I am pleased, of course, that the Newfoundland trouble has at last ended. Not only should the modus vivendi have been accepted by all concerned when the difficulty first showed itself, but there should never have been any occasion for a change in conditions. This season's trade has already been lost to Canadian millers, as sufficient supplies had gone forward from the States before matters were settled; but a good fall trade will be done.

* * * *

"Been a bad season for millers," said Mr. J. L. Spink. "Could hardly have been worse, yet if conditions favor us our representative in Britain may be able to do some business next fall. Chicago is doing a little better for wheat to-day (Thursday, 7th). This continued cold and rainy weather is not a good thing for the country, as a whole but on the old principle that it is an ill wind that blows no one good, it has a natural tendency to stiffen wheat prices with the stocks that are held just now. Rain has done harm to the growing crop in the States. I do not think it has affected the crop in Canada to any extent."

* * * *

"I am glad to see you agitating for a reform in the methods of shipping flour," said a prominent member of the Dominion Millers' Association. "The delays that occur in shipments to Europe are shameful. Now that the association has become incorporated, I am ready for one to enter upon a crusade against the officials who have the management of our carrying trade. It will be hard fighting and require more than one to do it, and for one I shall be pleased if the MILLER can get the association into fighting trim by the time of our next meeting. What we want is to get organized in such a way as to obtain information from the millers concerning these various shipping troubles, so that we can formulate our complaint as strong as possible and when seeking the remedy be able to cover every point."

* * * *

I have come across a sally of wit in a neighboring milling journal that will bear repeating. It's termed "A joke on Bessie," but, as the letterpress explanation goes, "A worse one on dad." In the present condition of the flour market, even though the joke is at dad's expense, our millers, I think, will enjoy it all the same. Here it is: Sallie: "Come on out, Jess, and have a try at tennis. What are you moping here for this lovely day?" Jessie: "Reason enough, I should think. I'm more likely to go into a convent than I am to play tennis." Paul: "Well! Seems to me this is sudden. What has occurred to give you these misanthropic views?" Jessie: "Why, it's that unprincipled dad of mine. He's enough to drive one distracted. Here I told him that I must have a new tennis suit and he said I might have all the profit he was making from a thousand barrels of flour. And when I came to reckon it up on the figures he gave me, the sly thing was losing ten cents on every barrel. Did you ever hear of such meanness?"

* * * *

It cannot be charged that the MILLER is much given to talking shop. I am sure no advantage is taken in this page to do any "tooting of one's horn," and as little in any other part of the paper. Nor am I going to make a break now. But the following talk by a level-headed business man is just good enough to find a place here, and also to be gummed up in some conspicuous place on the desk of every business man. "The employer who conducts his business on the theory that it doesn't pay, and he can't afford to advertise," says this writer, "sets up his judgment in opposition to all the best business men in the world. With a few years' experience in conducting a small business on a few thousand dollars of capital, he assumes to know more than thousands of business men whose hourly transactions aggregate more than his do in a year, and who have made their millions by pursuing a course that he says does not pay. Such talk in the year 1892 may well be considered ridiculous, and it requires more than the average patience to discuss the position of whether advertising pays or not. His complacent self-conceit in assuming that he knows more than the whole business world is laughable, and reminds us of the man who proved the world doesn't revolve by placing a pumpkin on a stump and watching it all night, basing his calculations on the result. If advertising doesn't pay, why is it that the most successful business men believe in it?"

* * * *

In the MILL PRODUCTS department of the MILLER, which is becoming one of special interest to readers, will be found an article on the carrying trade of the Dominion, where some account is given of the proposed Ontario ship railway, or as it is technically termed in the act of incorporation: "The Toronto and Georgian Bay Ship Railway." A few days ago I had a chat with Mr. David Blain, the projector of the scheme, and took advantage of the opportunity to learn from him somewhat of the scope and purpose of this project. As a matter of fact Mr. Blain is more than projector or yet the life of the project to-day, and he is all of that. If I may be pardoned the Hibernicism, Mr. Blain talked ship railway before such a scheme had even been conceived of by himself. "Having given thirty years of thought and study to the question of diverting the freight traffic of the upper lakes from Buffalo to Toronto," said Mr. Blain, "I am perfectly satisfied that the most workable plan yet proposed is to be secured in the projected ship railway. Of the particular method itself, it is true that it has not been tested to any large degree. And yet the main principle of lifting a ship out of water, removing it some distance and placing it safely in the water again, is one of common occurrence in ship-building in the old country. A case is on record in France where a vessel was taken out of the water and carried overland for 850 miles and placed back in the water. In operations on the Suez canal loaded vessels of considerable tonnage have been removed and carried overland and returned to their natural element. We have in our own country a ship railway in course of construction, and drawing well towards completion, by which vessels will be carried from a point in the lower St. Lawrence to the Bay of Fundy. The ablest engineers have no hesitation in speaking in positive terms of the practicable character of the plan. You ask what will be the advantages of the proposed railway to the grain and milling industries. So large a portion of the carrying trade of this country is dependent upon the products of the soil, and especially the yield of wheat, barley and other cereals, that just as the ship railway will be a great boon to every commercial interest in the land, so will it be a special and peculiar boon to the grain trades. Look at the congested nature of the traffic during the past year, caused largely by the immense crop of Manitoba and the Northwest. Furnishing by all odds the shortest and most complete route from the Northwest to the seaboard, you will readily see how these congested conditions can be helped by the proposed railway. We calculate when the line is completed to be able to run a switch to the leading mills along the route and enable millers to make many shipments more conveniently in this manner. I would like to see the question viewed in its broadest light by the business men of this country and the United States. It is a question in which both countries are interested and I have a letter from the Rochester Chamber of Commerce, which shows that the people there view the matter in that light. In the letter the president says: The subject is important enough for a conference between the Rochester Chamber of Commerce and Toronto Board of Trade to endeavour to devise plans for the restoration of the carrying trade of Lake Ontario, and states his readiness to see that a deputation is sent to Toronto for this purpose. We shall not lack effort in pushing the scheme into formative shape."

VIEWS AND INTERVIEWS.

Slipshod Employers.

The employer does not hesitate, and rightly, to condemn the indifferent workman. The man who does not throw heart into his work, whether it be ruling a kingdom or sweeping a street, is a useless workman. But, who makes the careless workman, in part, at least? Slipshod methods, as the system of the shop, have no little to account for. To use the illustration of one writer on the subject: "Hurry up, it's good enough," has spoiled many a good man, and if an employer habitually crowds his men with more work than they can properly accomplish, denies them the right, as it were, to honestly perform their allotted tasks, he has only himself to blame if eventually they become as careless as he is. Where such shiftlessness involves a loss to the customer it becomes culpable dishonesty, and the employer who permits this has only himself to blame if he becomes eventually the victim of his workman's lack of rectitude. We are weary of reading dolorous complaints and criticisms where the power to remedy the evils complained of rests with the complainer. There would be an immediate and permanent decrease in the number of lazy and negligent workmen if every employer kept up to the mark himself and had those he paid do the same thing." It is the old story: like priest like people, like master like servant.

Banana Meal.

The irrepressible banana has come forward as a new rival to flour and meal. A company with a capital of $75,000, under the name of the Banana Food Company, has been organized in New York, for the purpose of drying and otherwise preparing bananas and plantains for food. Experiments that have been made go to show that the fruit can be successfully evaporated and prepared for market either as dried fruit, as flour or meal, or canned in pulp. In one and all of these forms the claim is made that the product can be put up so cheaply and in such attractive shapes as a food supply that it will be certain to come into immediate and general use in America and Europe. The following comparative analysis has been made by Prof. Wynter Blythe, practical analyst, etc., London, England:—

Constituents	Banana Per cent.	Sago Per cent.	Cornmeal Per cent.	Wheat flour Per cent.
Water	8.05	13	11.09	15.08
Soluble albumen dextrine	4.45			
Starch	82.57	78.06	85.03	81.06
Albumenoids	2.28	2.57	2.37	2.11
Fat	0.77			
Ash	1.88	0.53	0.43	0.35

Careful observations have also been made as to the comparative loss of weight by evaporation, and it has been found that, while apples yield only twelve per cent., bananas with the skins removed will give within a small fraction of twenty-five per cent. of thoroughly desiccated fruit. Sanguine ones predict that it may prove the beginning of great things among food supplies of the world.

Grinding By Momentum.

A milling contemporary takes some fun out of an effort of the Australian Miller to boom the Cyclone system of milling. Our neighbor from the Antipodes had this to say: "We shall probably have more to say about 'Cyclone' flour shortly; in the meantime we may remark that the wheat grains are pulverized in sealed chambers by means of air-currents produced by fans rapidly revolving in different directions. The grains are reduced to a state of fine division by their own momentum, and the result is a fine whole-meal." This our American neighbor calls grinding by momentum. "Let's see," he says, "'Momentum' means, according to Webster, the quantity of motion in a moving body, and it is proportioned to the quantity of matter multiplied into the velocity. As the 'momentum' is merely the 'quantity of motion' in the moving grain, how will or how can it reduce the grain to flour? The earth and other bodies swinging through space have enormous 'momentum' but it does not grind them into dust. No conceivable amount or degree of simple 'momentum' could grind any object to powder. Our contemporary seems to harbor the idea that the 'cyclone' method holds the grain in air and grinds it there. A moment of thought will show that the 'momentum' must be changed into striking force in order to grind the grain, and that makes it necessary that the grain should collide with its container in order to produce flour. Americans seem to have dropped the 'cyclone' milling machine pretty heavily, but we were not aware that they had dropped it with force enough to send it through the earth, to reappear in Australia. We do not think that 'cyclone flour' will ever 'go,' even in Australia. It may do for a dream, but bread-eaters cannot eat awns and bran with profit or comfort, however finely they may be ground. The 'cyclone' idea implies a yield of 3.16, and the civilized stomach and other digestive contraptions revolt at the mere idea of receiving such fodder to handle. The 'cyclone' is an interesting cuss, but it is not good to eat."

Which Is Right?

Just now when many millers are arguing the question whether money is lost or made by remodeling, and opinions differ widely, our Kansas contemporary, the Roller Miller, comes to the rescue with the following statement of the case: "That depends; it depends upon who does the remodeling and what and how he remodels. If a mill needs remodeling, and the job is well done, it must be a money-making move, but if that is not the case the opposite must be true, and the cost of the enterprise must be lost. There is no general rule by which such questions as this can be decided; too much depends on individual judgment and isolated cases, which, while they go to make up the opinions of individuals, are not appropriated to the general fund of information. If in remodeling a mill and putting in new machinery the plant is not improved, one of two persons should be held responsible. First, the miller should know what he wants and how it will best serve him, and, second, the constructing millwright should know how to make his work and the machinery at his command bear out his guarantee. If the miller and the millwright understand their business and the mill needs modeling it will pay, but if either the miller or the millwright are not competent it will no more pay to remodel it than though the mill did not need repairs. Competent millers know when their mills need remodeling and competent millwrights know how to do that same; others should let such jobs out unless they have money to throw away."

Breads Ancient and Modern.

The man who takes a delight in his business, whatever that business may be, is necessarily interested in what others are doing, or have done, in his particular line. The gulf is wide between the present and the days of ancient Greece and Rome, but there are lessons to be learned from a retrospective, just as surely as from a prospective, view of affairs. In the January MILLER we gave a brief account of the "Breads of the Orient." Let us supplement the story with some particulars, as given by a French writer, of other breads of ancient times, and also of more modern days. "We can easily understand," says our French friend, "that there are many kinds of bread, as there are kinds of dough, which differ, either in consistency or whiteness from the bread which they call "firm dough," from the "half-light" bread, the light bread made with the softest dough. On the contrary, bread made with the firmest dough, kneaded with the feet and with the pounder, is called "pounded" bread, which was the "intritus" bread of the Latins and the "blema" of the Greeks. This bread was very famous 200 years ago under the name of Chapter Bread, or Gonesse Bread in Paris, and Fouasse at Caen. It was bread made with the greatest care. They gave it to be made as a trial piece for the reception to the "Mastership of Bakery." To-day they are no longer made. At the present time they make much less bread with a firm dough than was made formerly; it is either made of soft dough or half-soft, and since that time they have not been so regular in stamping the bread, as ordered by the police regulations; the loaves made from a soft dough do not preserve the mark like those from a firm dough. I must remark here that the larger the loaves, the firmer should be the dough, and the softer the dough, the smaller the loaves should be made. Bread is distinguished according to the whiteness as follows: Into white bread, formerly called 'Chailli bread,' the 'filigineus' of the Latins, and the 'oilignites' of the Greeks. 2. The household bread, which was the puffed bread called by the Latins 'secundarius,' and 'agelaiox' by the Greeks. 3. Coarse loaves, which the Latins called 'acerosus,' the Greeks 'autopurox.' 4. Finally, into brown bread, which the Latins called 'furfuraceus,' and the Greeks 'achnordes.' The various kinds of bread can be distinguished by the shape. There is the round loaf, long, horn-shaped, rolls, arc-shaped, which the Latins called 'hemicycleus,' the Greeks 'hemiartion.' There is the home-made bread. There are loaves which derive their name from the things with which they are used, like coffee-bread and the bread eaten by the ancients with oysters, which was called on that account 'ostrearius.' There is the crumb-bread, which is used to crumb meat. Finally, there is the table-bread, which is made into small loaves, which are put with the cloth on the table for meals. I find that the ancients also employed the rasped or grated bread. They called 'Miche' a kind of bread which is generally small in size, one pound, or at most, two. The 'Miche' was more common formerly than now; they are now only found in certain countries. The 'Miches' in Normandy are made with meslin, that is to say, with wheat and rye mixed. Each 'Miche' is divided superficially into two parts. They give generally two of these loaves for the meal of two laborers in the field. They call 'Munition bread' that given to soldiers, and 'King's bread' that given to the prisoners and galley-slaves. Pliny complains that in his days refinement and luxuriousness were carried to such extremes that even in the choice of bread and its shape the ranks were distinguished. He remarks that the bread of senators and knights was different from that of the people, and that there was also a distinction between the bread used by the inhabitants of towns and that of the peasants. The Latins called pastry bread 'artologani,' and ordinary bread 'cibarius.' When different things are introduced into the composition of the dough, it is not included under the name of what we now call bread; it is pastry. Nothing should be employed in making the dough beyond flour, water and a little salt; when anything else is mixed with the dough, it is not, strictly speaking, bread. The ancients employed wine and oil in their pastry, sometimes butter; they called this 'bouturites.'"

BREAD IN FOLK LORE.

IN the Vosges, by baking bread between Christmas day and the New Year, death would be brought into one's house or that of one's relations. In Haute Bretagne bread should not be baked on Christmas day or Easter Sunday. Animals which eat bread baked on that day would talk. The inhabitants of the Black Mountains and those of Burgundy believe that, if bread is baked during Rogation week, that baked during the year will become mouldy. In Charente it injures the health.

In Aube bread must not be baked on the feast of St. Nicholas, because the flame rushes from the oven. In Haute Bretagne bread baked on Good Friday becomes black. In Asia Minor they take good care not to light the oven on that day. In Sicily there is only one day on which they do not bake, Good Friday, for fear of burning the Saviour. In Charente bread baked on All Souls' day gives diseases to those who eat it. In Ardennes it would be indigestible and become mouldy as soon as taken out of the oven. In Haute Bretagne no bread should be left in the oven during the night of All Saints, as fairies would come to eat it. In the United States they say that bread is never good when baked on Sunday. In Gascony no bread should be baked on Friday. Persons who did not observe this custom found blood in the oven and crumbs of bread all red.

It is not very rare to meet with half-arched cavities in the rocks or big blocks of stone, which are not unlike an oven. The people say they belong to the fairies, who, according to the common legends, came to put their bread in the oven when they were not baking it, which is most frequently the case, in subterranean dwellings, where they had an establishment like that of a castle.

In the environs of Cheroy, in Yonne, the Devil's Oven seems to be the popular name for the Megaliths. It is also possible that the word oven means the place where the diabolical assembly ("four oven" for "forum") was held. It is probable that in certain countries, at the time of building the ovens, they place in some part of the masonry a "thunderstone" or a coin as a preservative.

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SOLE MANUFACTURERS FOR CANADA; **WM. & J. G. GREEY** 2 CHURCH ST. . . . TORONTO

CANADA.

THOMAS BUCK, miller, Norwood, Ont., is dead.

GEORGE PHILLIPS, flour and feed, London, Ont., is dead.

GRAIN shovelers at Kingston, Ont., are making from $16 to $20 per week.

THE new mill of Mr. McLean, at Calgary, N.W.T., will be huilt of stone.

DEFICIENT elevator accommodation, at Kingston, Ont., is complained of.

SCANTHON & MARSHALL, flour, grain, etc., Montreal, Que., have dissolved.

THE grist mill owned by Comstock & Co., at Rock Island, Que., is burned.

THE mill dam at New Lowell, Ont., which had been swept away, is to be rebuilt.

THE premises of T. Green, grain, Winnipeg, Man., have been destroyed by fire.

A BY-LAW to bonus a flour mill at Balder, Man., has been carried by a large majority.

THE larger portion of the capital for the farmers' grist mill, at Lisle, Ont., has been subscribed.

A FARMERS' elevator, with a capacity of 50,000 bushels, will he erected this year at Glenboro, Man.

STOCK is being subscribed for a fifty barrel flour mill and an elevator of 20,000 bushels at Belgonie, Assa.

FRESHETS at Delhi, Ont., the carly part of the month swept away many bridges and endangered the mills.

THE Farmers' Elevator Company, of Carman, Man., is increasing its capital stock from $10,000 to $15,000.

AUGUSTE GIRARD, grain merchant, Montreal, Que., has been appointed consular agent of France at that port.

ALEX. MCLAREN, of Osceola, contemplates building a flour mill in Cobden, Ont., if sufficient inducements are offered.

A LARGE four-storey flouring mill is about being built by Lake & Bailey, at Hamilton, Ont., fitted with the best machinery.

A ROLLER process mill is to be built at Edmonton, N.W.T., by J. & R. Ritchie, of Wemyss, Ont. Capacity 100 barrels per day.

J. A. TOMLINSON, flour and feed, Vancouver, B.C., has admitted Mr. McTaggart, under the firm style of Tomlinson & McTaggart.

FRANK DAVIDSON, of Howick, Ont., is showing samples of fall wheat twenty-five inches long; not a bad showing for this time of year.

THE working output of the mills of W. W. Ogilvie & Co., at Montreal, Goderich, Seaforth and Winnipeg, average 7,500 barrels a day.

C. N. BELL, secretary of the Grain Exchange, of Winnipeg, Man., is holidaying at Banff, N.W.T., endeavoring to recuperate his health.

THE ratepayers of Lanark, Ont., are discussing the advisability of offering a bonus to anyone who will build a flour mill in the village.

ENGINEER Polette, of number seven grain elevator, Montreal, Que., was scalded to death on the 31st ult. by the bursting of a boiler.

THE Grain Exchange, of Winnipeg, Man., is talking of erecting a grain exchange building on the corner of Princess and Jemima streets.

DENIS & DUROCHER, flour and grain men at St. Hyacinthe, Que., have assigned, with liabilities of about $5,000, owing principally to local millers.

A TRAIN of flour from Duluth, Minn., consigned to Boston, Mass., passed over the C.P.R. Nineteen cars carried 3,800 barrels, or 760,000 pounds.

THERE is a movement on foot to purchase the Morton elevator at Boissevain, Man., by a syndicate of local farmers, and make it a farmers' elevator.

THE Cartwright flouring mill, Kingston, Ont., the property of Sir Richard Cartwright, has been fitted up with new and improved roller process machinery.

ABOUT 2,000 bushels of the wheat cargo of the propellor Enterprise, taken in at Fort William, Ont., was found damaged on discharging at Kingston. The grain will be sold by auction. Bad weather on Lake Superior caused the damage.

WALTER SHANLY, the eminent engineer, has written a letter to the mayor, of Prescott, Ont., approving in strong terms of the erection of an elevator at that port.

GEO. HAMILTON, of Alexander Brown & Co., grain merchants, Toronto, was present at the meeting of the United States Millers' Association, in Chicago, on May 24-25.

A BARN stored with grain belonging to James Whelan, of Eardsley township, Ont., was burned to the ground on the Queen's birthday, through one of his children setting off firecrackers.

SEEDING in Manitoba has been delayed some by the damp, cool weather of the past month, but taken altogether the season is regarded as one of the most promising in the last five or ten years.

THE British Columbia Milling and Feed Company, of New Westminster, B.C., are negotiating to erect a capacious mill, if they can secure the necessary land from the corporation and the water rights and power at a reasonable rent.

WESTMINSTER, B.C., is likely to have both a flour mill and an oatmeal mill at an early day. Negotiations are now in progress with Henry Waller for the erection of a 100 barrel flour mill. Spallum cheen and Northwest grain would be used to a large extent for milling.

THE big elevator to be built at Boston, Mass., this year, under the direction of Mr. Jamieson, superintendent of elevators for the Canadian Pacific Railway, will place that seaport in better shape to handle Canadian wheat exports next winter. The capacity will be 1,400,000 bushels.

PETER MCLAREN, the big lumberman, is forming a syndicate in New York for the manufacture of patent cars to be used in the grain business. By the patent a car can be unloaded in four seconds, and a train of seven or eight cars in four minutes. Mr. McLaren has taken stock to the extent of $75,000.

THE North American Mill Building Co., of Stratford, Ont., are putting modern machinery into J. R. Stuart's flour mill, at Mitchell. They have also fitted up the mills at Otterville, belonging to S. B. Lossing. The new machinery recently placed in the Portage la Prairie mill of the Lake of the Woods Milling Co. was from the same company.

A SPECIMEN of Russian bread that was brought from the land of the Czar was exhibited on 'Change, Toronto, a few weeks ago. It came through Mr. W. C. Edgar, of Minneapolis, Minn., who had been to Russia to superintend the distributing of America's contribution of flour to the suffering Russians. It was dirty, black-looking stuff.

THE Melita Milling Co., Melita, Man., have an offer from a capitalist, says the Enterprise, to furnish the requisite amount of money to erect a 200 barrel mill to be in operation early in September, providing the municipality will grant a bonus of $2,500 to defray the expense of laying pipes to bring the water from the river to some point near the station grounds.

THE Huron Roller Mills, Penetang, Ont., have commenced operations again after being shut down for a few days, making a change at head and tail of mill, viz., a new Richmond wheat separator, and an entire elevator reel in place of centrifugal, discarded. Mr. S. A. Milligan, who had been in Norland for a few days, has returned, and is holding down the old situation.

THE settlement of Ayr, Ont., dates from 1824, when Abel Mudge built a grist mill on the site now occupied by the Watson Manufacturing Company. The place was then designated "Mudge's Mill," and it was not until 1840, on the arrival of Robert Wyllie (of Ayrshire, Scotland,) from Galt, and the establishment by him of a store and postoffice, that the village received its present name.

THE announcement is made in London that the money has at last been procured for establishing the Northwest grain route by rail to Fort Churchill and thence by steamer through Hudson straits to England. The main object of the project is, of course, to furnish an outlet for the grain of Manitoba and the Saskatchewan region and that of Minnesota and Dakota by offering a shorter and cheaper route to Liverpool.

THE officials of the Winnipeg grain exchange report that in Manitoba vegetation is well advanced and the prospects most favorable. They say that there is considerably larger area put in crop this spring than ever before. In some districts not more than fifteen or thirty per cent. of last season's wheat has been threshed and farmers are now hurrying to complete their threshing. The reservation of such a large quantity of grain in the country will make summer traffic on the Canadian Pacific railway unusually heavy. There is still an enormous quantity to be shipped east, making the ensuing season an exceptionally busy one for all. Every interest of the country will be benefited. There will be a continual circulation of money, which will tend to revive the hopefulness of both farmer and merchant. If the weather continues warm and dry threshing will be very general throughout the province in a short period.

D'ARBLAY'S mills at Corbeil, France, with 70,000 bushels of wheat, burned.

THE Star City mill, Lafayette, Ind., burned: loss $14,000, insurance $6,500.

BLACK rust has appeared in some of the finest wheat fields in Virginia, Ill., and serious damage is feared.

A BIG mill will be built at Philadelphia by the Isaac Harter Co., of Fostoria, O., and flour dealers of Philadelphia.

L. S. JEFFRIES, secretary of the South Dakota Russian Relief Commission, reports that his State will send fifty cars of flour, etc., to Russia.

THE average yield per acre of wheat in North Dakota, according to Commissioner Helgeson, is 22.58 bushels, while Statistician Dodge places it at only 17.8.

A ST. LOUIS dispatch says the latest estimate of the loss by the terrible floods in the Mississippi valley is $29,300,000. The main items are wheat and corn, $16,000,000.

ACCORDING to the Chicago Trade Bulletin, parties who buy buckwheat say that hereafter they will buy it only on a 100 lb. basis, owing to difficulty arising from varying weight per bushel in different quarters.

IT is stated that the business of insuring growing grain, practically unknown in the east, is now just at its height on the Pacific coast. An immense business is done in this line by many of the large companies and it is almost always profitable.

THE Tacoma Ledger reports that that city has secured an important new milling plant, to cost $200,000, of which $100,000 will be raised among citizens of Tacoma and $100,000 by eastern parties, some of whom are well known in this section.

A. C. CLAUSEN, chief grain inspector of Minnesota, after making a tour of inspection, states that he believes this year's crop in Minnesota and the two Dakotas is likely, from present appearances, other things being equal, to fall from 40,000,000 to 50,000,000 bushels short of last year's crop.

THE Neenah Water Power Co. began suit a few days ago in the courts at Oshkosh to restrain millers from using more than two-sevenths of the river flowage. The suit is one of great magnitude, and involves millions of dollars' worth of property—flouring as well as paper mills being affected.

A FIRE at Spokane Falls, Wash., on 24th May, destroyed property to the amount of $3,000,000, a considerable part of which was flour mills. The main losses are: Spokane Mill Co., $100,000, no insurance; Echo Flouring Mills, $50,000, insurance $22,000; Oatmeal mill, $30,000, insurance $17,000.

THE wheat flour exports from the United States to Germany in March were 6,932 barrels, against 325 barrels in the preceding March; and during the nine months ending with March 40,106 barrels, valued at $197,814; compared with 6,819 barrels, valued at $29,667, during the corresponding months of 1890-91.

THE United States milling trade has lost one of its best known and most influential representatives in the death of F. C. Pillsbury, of Minneapolis, head of the extensive concern going under the name of the Pillsbury-Washburn Flour Mills Co. He was also a director of the Northwestern Consolidated Milling Co. He was sick only a few days; aged 40 years.

THE Riverside Milling Co. has been organized at Davenport, Ia., with capital stock of $250,000 to build a 500-barrel mill. Messrs. Finch & Hayward, prominent grain dealers and owners of numerous grain elevators, are interested in the new enterprise, as well as H. C. Johnston, who is a miller of national reputation and will have the management of the Riverside mill.

FIRE broke out in one of the large elevators on the water front, Oswego, N.Y., on May 21st, and before it was gotten under control two large mills and all the elevators in the city except one had been destroyed. Among them was the elevator belonging to the W. D. Matthews estate, Toronto, assessed value $50,000. The losses are variously estimated at from $500,000 to $1,000,000.

THE American Steel Barge Company at West Superior have launched from their shipyard the whaleback steamer Samuel Mather, sister boat of the Thomas Wilson, launched a few weeks previous. The Mather is 323 feet long, and is built to carry 100,000 bushels of wheat in 14 feet, 6 inches, and 10,000 bushels additional for each extra foot of draft. The tonnage of the Steel Barge company is fast approaching 100,000 tons.

KINKS IN MILLING.

BY R. JAMES ABERNATHEY.

THE question is often asked, can rolls be reground to work true without returning the journals? If the journals are worn out of true they cannot, but if the journals are still true, and the rolls hung on the journals while being reground, there is no reason why the rolls should not work true. Regrinding rolls while suspended by the centres only is rather uncertain, as no matter how perfectly they may be made in the machine, they are almost certain to show signs of eccentricity or other evidences of untruthfulness when put back into working position. The journals should be carefully examined whenever rolls are to be reground, and if found out of true in any shape, just as carefully trued before the surfaces of the rolls are touched, and then no matter how suspended in the grinding machine, the surface must be ground exactly to the journals. When so done the rolls ought to run together very perfectly.

There is still a chance, however, of getting finely-corrugated rolls out of true while corrugating them after they have been ground as true as is possible. Carelessness in cutting the corrugations too deep on any part of the surface will do it. The edges of the corrugations always represent the surface of the rolls as they were before reaching the corrugating machines, or before the corrugating tool has been applied. If by carelessness or otherwise the tool is allowed to cut too deep at any point, the natural sequence will be that the original surface will be torn off the edge of that corrugation and it left below the proper surface. If several corrugations of that kind come together there is a low place in the roll, or, in other words, it is out of true and cannot be made to work well. If a number of such spots are made on a pair of rolls it leaves them in about as bad condition as before being redressed. Skill and much care are required in redressing rolls both in grinding and corrugating.

The small millmen frequently ask how much middlings roll surface ought there to be? The amount of smooth-roll surface depends on the grinding system. one reduction only is made on the wheat, that is, if we use one pair of rolls to reduce with there should be two pairs of smooth rolls to finish with, and even then it would not be a certainty at all times. If the stock were damp and tough there would almost sure be an unfinished waste to go to the feed pile. When two breaks are made on wheat, using two pairs of rolls for the purpose, a good finish at all times and under all circumstances requires four pairs of smooth rolls, as with a less number proper divisions of the stock cannot be made. It is quite common, though, in some sections for two break mills to have but two pair of rolls, which seem to be about all that is needed for such mill. Notwithstanding that fact those who wish to do strictly good work in competition with other good mills, and make reasonably close yields, ought not to be stinted in smooth roll surface, for it will be found needed most of the time, and can be well utilized all the time.

Break or corrugated surfaces may be crowded without much detriment up to a reasonable limit, but it is always hazardous to attempt to crowd smooth rolls as the invariable result is a waste of stock. It is not good policy, though, to crowd either corrugated or smooth rolls; far better to have surface enough to do the work required in a natural and easy way. No specific statement of the actual quantity of surface to fit all cases can be made. We must first know the required amount of work to be done, then specifications as to other circumstances and conditions, before it can be said with certainty how much roll surface it will take to do the work. But it is safe enough to say that none too much will be provided, or rather specified, by those desiring to furnish, owing to sharp competition and the fear of making the cost too much, so the purchaser will be safe by leaning toward the liberal supply side and buy that way.

Millers quite frequently ask how much low grade flour they should make, and seem to expect a specific answer. A little reflection ought to convince all that are in the least interested that the quantity of low grade flour to be turned out must be governed very largely by circumstances. First, the system of milling must be considered. If the machinery outfit is elaborate and ample in every direction, the plan and flow systematic and good, the low grade should be reduced to a minimum. If on the contrary the outfit of machinery is scant and the plan and flow arranged to suit the machinery then will it be necessary to make a larger quantity of low grade to insure a good grade of the better flours. Much depends on the amount of machinery used and the manner it is arranged. But again different grade and conditions of wheat calls for modifications in the quantity of low grade to be made. The mill may to-day be supplied with a superior stock of wheat and the miller reduces the low grade output. To-morrow the stock may be inferior and the low grade output is increased. The miller must exercise good judgment and keep his high grades of flour in standard condition and allow the low grade to take care of itself. If to-day the conditions require a larger percentage of low grade, turn it out. If to-morrow less is required, reduce it. Be governed by circumstances and conditions, always mindful of the character and reputation of the best flour, upon which all depends.

SHAFTING.

BE sure that the shafting has a firm foundation, that the hangers are strong enough and not spaced too far apart, that they are lined up in good shape and well provided with means of lubrication. It may pay to reduce the size of shafting as you go further from the engine, for everything that helps to take friction from the engine load is beneficial; this requires careful calculating, however, and should not be done by guess work; it does not pay.

UNITED STATES MILLERS' NATIONAL ASSOCIATION.

THE sixteenth annual convention of the Millers' National Association of the United States was held in Chicago, Ill., in the Grand Pacific hotel, on Tuesday, May 24. Owing to the floods throughout the Central States, many of the prominent millers of St. Louis, Minneapolis and other milling towns were unable to attend the convention. The attendance was less than fifty. President James occupied the chair. Treasurer Seamans reported a balance of $5,852 in the treasury. Secretary Barry reported that during the year sixty-five companies had dropped from membership in the association, including nearly every miller in St. Louis. He charged their dropping out to the large annual dues of $10 for 100 barrels of daily capacity.

Mr. John G. Thomas, of Chicago, read an able paper on "Fireproof Mill Construction and Automatic Sprinklers," in which he asserted that there is one loss to which all manufacturers are subjected, even though they are fully protected by insurance, and that is the loss of business for a season in consequence of the loss of time between the event of a fire and the rebuilding after the adjustment of the loss. A good average record for rebuilding after a fire means a loss of half a year's business. Of automatic sprinklers, he said, eighty per cent. of all fires in flouring mills, where there was sprinkler connection, had been promptly extinguished without the aid of the fire department. During the last three years there had been a fire loss in mills in the United States of $16,000,000, much of which could have been avoided by the proper use of automatic sprinklers.

An address on "Transportation" was delivered by Mr. E. P. Wilson, of the Cincinnati Freight Bureau. He asserted that the producer and the transporter are necessarily partners. What injures one brings harm to the other. The value of co-operation is shown by the forty or more organizations kept in existence by the railroad companies at great expense. Good had come from the organization of millers. Good might be accomplished by the adoption by the railroads in this country of a system now in vogue in European countries, whereby the transportation lines set a time limit on their delivery of freight, failing in which they become subject to certain penalties. The transportation companies have established car-service bureaus to impose penalties for undue delays in unloading and loading cars; but the shipper has nothing whereby he may impose penalties for unjust delays in transit. Mr. Wilson urged friendly co-operation between carriers and shippers.

President James presented for consideration an amendment to the constitution to reduce the initiation fee from $10 per unit of 100 barrels of daily capacity to $5 per unit. The amendment was rejected by a vote of 144 to 278. The association then voted unanimously to empower the executive committee to fix the annual dues.

The committee on nominations presented the names of William Sanderson, of Milwaukee, for president, C. B. Cole, of Chester, Ill., for first vice-president, A. C. Loring, of Minneapolis, for second vice-president, and S. H. Seamans, of Milwaukee, for treasurer. All were unanimously elected.

NOTES AND NEWS.

We have to thank our friends in St. Louis for a tastily printed invitation card drawing attention to the 15th annual excursion of the millers and flour merchants of that city, which took place per steamer Grand Republic on the 1st inst. If not there in flesh we were with our American dusties in spirit.

There is some difficulty at the present time in getting grain to fill all the steamships that are in port at Montreal, and this despite the fact that there is lots of grain in store at this port. On this account freights are rather dull. The principal reason for the difficulty lies in the fact that the English markets are in a bad condition, and shippers are holding their grain in the hope of some improvement. There are also a greater number of steamships in port at this time than probably ever before at this season of the year, so that more grain is required to fill them.

The statement is made by a local newspaper correspondent, writing from Winnipeg, Man., that: "The grain men, who have had an unsatisfactory season, are not talking of branching out much in building new elevators this year. The Lake of the Woods Milling Co. will probably take the lead in elevator building. It is understood that this company proposes doing a grain-shipping as well as a milling trade. The company is now obliged to take in considerable wheat at its country elevators, which is not of a quality suitable for its milling requirements. It is, therefore, the intention to extend its elevator system and do a regular exporting trade in grain, so that all grades of wheat can be taken at its country elevators."

Important changes in grain freights have been announced by the Grand Trunk and Canadian Pacific railways. The former will give following rates on grain in carloads of 30,000 pounds medium or over to Montreal for export exclusive of terminals: North and west of London and Stratford, 14c.; west of Rockwood to London and Stratford, 12½c.; Minesing to Penetang, 14c.; Everett to Nottawa, 14c.; Gowan to Hawkstone, 12c.; Weston to Rockwood, 12½c.; Davenport to Barrie, 11c.; Toronto to Belleville, 10c. The C.P.R. notify through Mr. Bosworth that from the 13th inst. the rates on grain to Montreal for export will be 10c., 12½c. and 14c. per 100 pounds from various group points. This is exclusive of any terminal charges at Montreal.

It is currently reported that Owen Sound is to be the terminus of a whaleback line under the management of the C.P.R., and running from Lake Superior or Lake Michigan ports. Mr. Henry Beatty, manager of the C.P.R. lake traffic, has recently visited Duluth, where a number of whalebacks have been on the stocks during the past winter, and this fact, together with the very extensive character of the improvements which the company have made to their docks here, lends some color of truth to the rumor. Practically all their docks have been rebuilt in the most substantial manner, and they are now said to be equal to any wooden docks in America. Besides this they have been largely extended, and the facilities of the company for handling freight at this port are now vastly greater than ever before. In fact no expense whatever has been spared and the sum of money recently outlaid on dock improvements must have been truly immense. These improvements were commenced early in the winter and are not yet entirely completed, and the fact that the company have made such an extraordinarily large outlay on their portion of the harbor front, naturally lends force to the report that is now current.

PUBLICATIONS.

The Millstone, of Indianapolis, has been displaced to make way for Milling, a new monthly journal issued by the same publishers, the D. H. Ranck Publishing Co. Milling marks the first attempt, we believe, in this country to produce a journal devoted to the grain and milling trades, which takes on a distinct literary and artistic character rather than the simple caste of straight business. It is gotten up in modern magazine form, printed on fine quality of paper, well and handsomely illustrated, and its literary contributions are in keeping with the general plan of the journal. We trust the venture may prove abundantly successful.

The edition of Cawker's American Flour Mill and Grain Elevator Directory for 1892-93, published by S. H. Seamans, Milwaukee, Wis., is a volume containing much tabulated information of value to those engaged in the grain and milling trades in both the United States and Canada, as well as a directory of millers throughout both countries. A comparison is made with the changes in milling since 1888, showing that geographically these have in some instances been quite noticeable. In both Canada and the United States a decrease in the number of mills is shown, but this is more than offset by the increased average and aggregated capacity. In New Brunswick and Nova Scotia the decrease is greatest. A large amount of labor has been expended in the preparation of the work, which is published at $10, and can be ordered through the CANADIAN MILLER.

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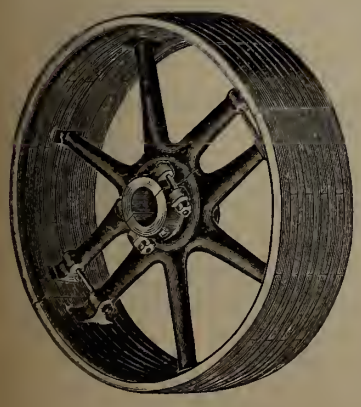

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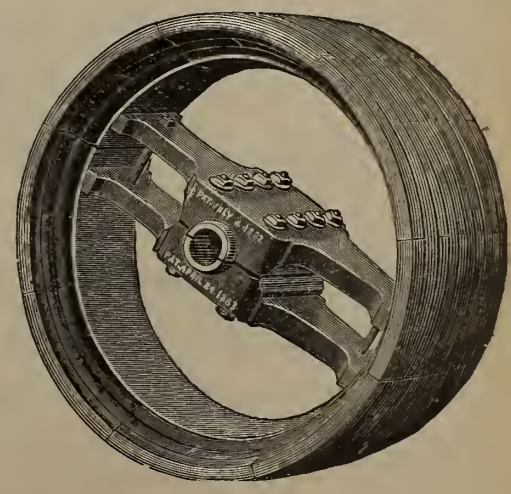

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WINTER-WHEAT FLOUR IN EUROPE.

BY LOUIS H. GIBSON, IN "MILLING."

"THERE seems to be something the matter with the winter-wheat flour. It does not give the satisfaction that it used to." This came to me from a merchant in Amsterdam. I heard about the same thing in Glasgow and Liverpool, but it did not surprise me so much there. I knew of the particular strength of the spring-wheat flour in Glasgow, but thought that in Amsterdam I would find the firmest friends of the winter-wheat flour. I remembered that several years ago this flour was particularly favored by the buyers in Holland, and I knew that if there were changes in their regard for it, there must be a reason for it. I said to an Amsterdam merchant: "To what do you attribute this? Why have your buyers come to regard spring-wheat flour more favorably than in the past?" "It is not for me to say. I am a dealer, I sell flour; I sell to the people who know the demands and requirements of the retailers. The reasons are not important to me. I have no care in the matter. If the dealers want spring-wheat flour I can get it; if they want the winter I can get that. I supply the demands of the people."

I told him that I knew his position. I knew that he was a flour dealer, that he bought flour to sell, and did not buy it because it was from winter or spring wheat, but that I did not believe him when he intimated that he did not know the reasons for any change in the demand of the buyers; that I did not believe any merchant could be so inert in a matter of that kind as he pretended to be. Then it was that I asked him a direct question. "Do you believe that the winter-wheat flour is as strong as it used to be?"

"No, I do not," he said. "I know that it is not."

"Well, then, do you believe that spring-wheat flour is stronger than it used to be?"

"I cannot say that I do. In truth, I believe that there is less hard spring wheat going into the spring-wheat flour than there used to be. Yet, it is my earnest belief that the spring-wheat millers have shown more desire to improve the quality of their flour from the outset. I think they have shown more enterprise and more push than your winter-wheat millers. I believe that the spring-wheat millers have always tried first to make a high grade flour and that other considerations have been wanting. Because of their high principles I believe they are reaping the benefit of their action to-day."

"I judge by the character of your remarks that you do not place this high estimate on the general disposition of the winter-wheat millers."

"As a class I do not. They probably know what they are doing, and are satisfied with their course, or I judge it would be different. While there are exceptions in the case of the winter-wheat millers I do not think the quality of the product has been their first aim. I am disposed to believe, from an extended knowledge of that trade, that their first thought has been to make a cheap flour, and having made it cheap, to make it as good as possible. You see there is a difference. With the majority of the spring-wheat millers, my experience is that their principles are, first, to make a high-grade flour, as high as possible, and having done that, to make it cheap, of course; but first to make it good. In the case of the winter-wheat millers you see I have reversed this order. They want to make cheap flour and then make it good."

"From what you have seen how do you think this thing was worked out?"

"If I were to tell you really what I think about it, it would make quite a little history."

"Tell me, anyhow," I said.

"Well, none know better than you that the new process was developed by the spring-wheat millers. For some reason or other they have been leaders ever since. Originally winter-wheat flour was superior to the spring. It brought more money because the spring wheat could not be made into as good flour. Then came the new process, and the quality of the spring-wheat flour led to great advances. The spring wheat took the precedence, which it has maintained ever since. The spring-wheat millers have been the leaders in the processes and the winter-wheat millers have been the followers. Every great advance that has been made in milling has been made by the spring-wheat millers; the winter-wheat millers have always lagged behind. The only movement in which they led was a retrograde one. They did not have a respectable following, however, outside of their own section."

"That is interesting," I interjected, "to what do you refer?"

"I refer to the short system, of course. It is the one distinctly winter-wheat movement in milling."

"But," I argued, "few or none who took up with the short system have changed back. Those who were first and most radical in going into it, still adhere to the system."

"True," he answered, "too true. Winter-wheat millers took up with the short system because it was cheap, made more flour with less machinery, at less expense. They had always been a little behind in process movements; when it came to matters of quality they were always at a disadvantage, so when the short system offered the competition in cheapness—the advantage of a lower-cost product—all were ready to take up with it. This I regard as a great retrograde movement, a general movement, and one which has affected the relative standing of winter-wheat flour in the foreign markets. As soon as the change was general to the short system our people were pleased with the whiteness of the flour, but soon after felt the necessity for adding an element of strength and the spring-wheat flour has been gaining more and more ground each day ever since that time.

"Do you not think that the winter-wheat flour fills a place which will never be taken by any other?"

"Certainly I do," said he, "but that is not the point. You are missing my idea. Winter-wheat flour does occupy a place and always will, but it does not occupy the place that it might. It does not occupy the field which properly belongs to it. I am confirmed in my opinion by one of the shrewdest and most successful millers in America; one who is in a position to mill both winter and spring-wheat flours. That spring wheat has always been subjected to milling generally more skilful than that which has come to the winter wheat. I think the difference in the character of the flour is more largely due to the difference in the way in which it is milled than by inherent and natural differences of the wheat. While there is something about the spring wheat flour which is unique, there is a character in winter-wheat flour, properly made, which I think was lost in the effort to merely cheapen the processes of its manufacture. This, I am sure, was the result of the short system. Winter-wheat flour is now soft, less strong, though because of its softness is somewhat whiter than it used to be. Yet it lacks many other of the elements which belong to the best grades of flour. While winter-wheat flour, as you suggest, has its place, even as it is it does not occupy the place which might belong to it. Before the short system began to have its effect on winter-wheat milling, there was a number of mills in America which were making a flour strong, coarse, and of a character sure to win its own way with the best trade. But they were nearly all led in the same direction and we now have the general character of winter-wheat flour affected by this movement."

"How about the demands in France and Paris for winter-wheat flour to the exclusion of the spring?"

"Simply because they know the winter-wheat and do not know the spring-wheat flour. The French mills have been milling a soft wheat because they are better equipped for handling it than the other. The French mills have always been mechanically beyond both the American and the Hungarian. They have the soft wheat and can handle it easier than the hard. When the hard wheat came to them they always ground it in a mixture, and thus gave it the character of soft wheat flour. The trade is educated to it; nothing else has been offered to them. In the nature of things they will not change to the spring wheat until it is offered to them. Naturally it is now easier to sell winter-wheat flour than spring, but the natural difference in the two flours would tell in a short time. The French are quick enough to find out which makes the cheapest bread. A little missionary work would soon tell, and spring-wheat flour would take the same relative position in France that it has in the other countries where it has found a place."

"Ireland clings to winter-wheat flour, does she not?"

"With the family trade, to a certain extent, yes. But you know well enough that there was a time when the Irish trade was almost entirely for winter-wheat flour. To-day you will find that the Belfast and Dublin bakers use the same mixture, the same general proportion of spring-wheat flours as the bakers of Glasgow. They use the winter wheat, but they use the spring-wheat flours with it, and the best is none too good. The family trade of Ireland buys white winters to make mantel ornaments. A great many people who bake bread have only one thought in mind—that it be up to the neighborhood standard of whiteness. They do not calculate the cost and are more largely affected by appearance than by anything else."

In writing this I am quoting what came to me. I had known the demands of foreign trade as it existed several years ago. In meeting the dealers I always had about the same set of questions to ask as to the disposition of the trade toward spring and winter-wheat flour. Coming from the winter wheat section and having my prejudices allied with it, I was always disposed to take the side of the winter-wheat flour. While the general disposition of buyers was at first to take the stand that they were mere dealers and not very much interested in the distinctive interests of a particular section, yet I was generally able by industrious questioning to find their prejudices, which were quite universal in favor of spring-wheat flour. All acknowledged that winter-wheat flour has its place, but not the high place which naturally belongs and has belonged to it, and that it is not the strong flour that it used to be. I found more interest in milling methods than I could have expected and certainly much broader general information among the dealers.

TRADE CURRENCY.

D. Parent & Co., grain, Montreal, have assigned.

G. Heimbocker, grist mill, Hanover, Ont., has sold out.

Malcolm Leith, of Medonte, Ont., is fitting up his flour mill with rollers.

Shipments of wheat from Duluth, Minn., during the first three weeks of May eclipsed all previous records.

T. H. Taylor & Co., woolen and flour mill, Chatham, Ont.; now the T. H. Taylor Co., (Ltd.), authorized capital $150,000.

The place where they are making a barrel of good merchantable flour out of 4:20 bushels of wheat is a good locality for missionaries to get in their work.

The flour mill of Campbell, Rutherford & Sinclair, Blenheim, Ont., was burglarized a week ago. The thieves got nothing but notes and private papers which will be no use to them.

A mean devil of a miller out west, when asked by his wife "what kind of cake she had best make for her mother?" who was coming to visit her, replied: "Sponge cake," and then he offered to go and "buy the sponges."

In milling there is no such thing as an easy job—that is, when it comes to taking charge of a mill, or even a watch. It all means work and takes ability. Of course some men will run a watch fully as well as others with half the effort, and some head millers will conduct the mill "right up to the handle" by making his seconds do all the work, yet still it is work and takes ability.

Mr. Harris, formerly grain inspector in Toronto, and now engaged in business on his own account in Winnipeg, Man., is a firm believer in the theory that, one year with another, the farmer who holds his grain for higher prices loses. He says that his experience leads him to the conclusion that seven times out of ten, the man who holds loses. Especially is this the case with grain held in elevators, subject to storage, insurance and other charges, which usually eats up any advance in price. The cost of carrying grain, shrinkage, etc, turns the scales decidedly in favor of early marketing.

TRADE NOTE.

A man by the name of C. B. Dudley, who claims to have some reputation as a chemist, has recently made some analysis of anti-friction metals among which is the Magnolia Metal. There are gross errors in the analysis of Magnolia Metal, and those of other anti-friction metals are incorrect. H. G. Torrey, U.S. Assayer in U.S. mint service, New York, has written the following so far as Magnolia is concerned: "In the analysis of Magnolia Metal Dr. Dudley has overstated one constituent part, and has omitted tin (which it always contains) and other materials. On the same page is given an analysis of antimonial lead, which may be correct, but not an ounce of this is ever used in Magnolia Metal."

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 12th of each month to insure insertion in the following issue.

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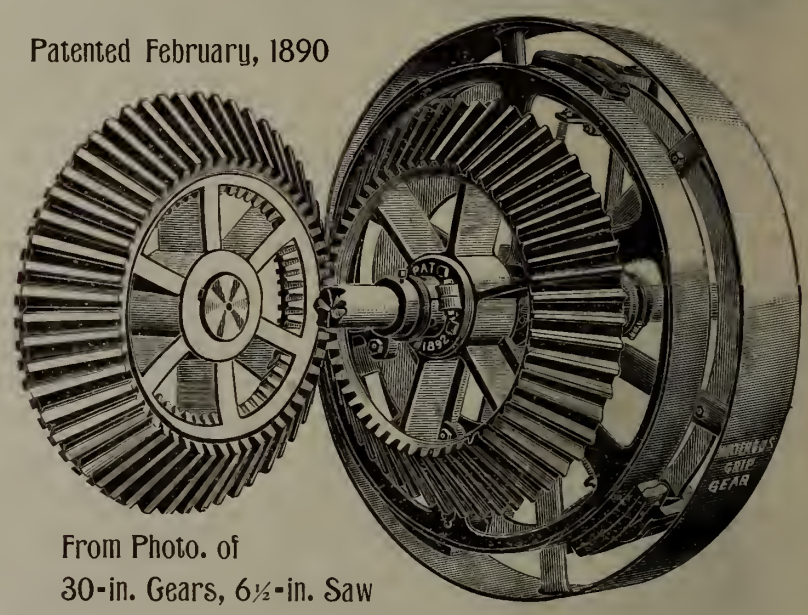

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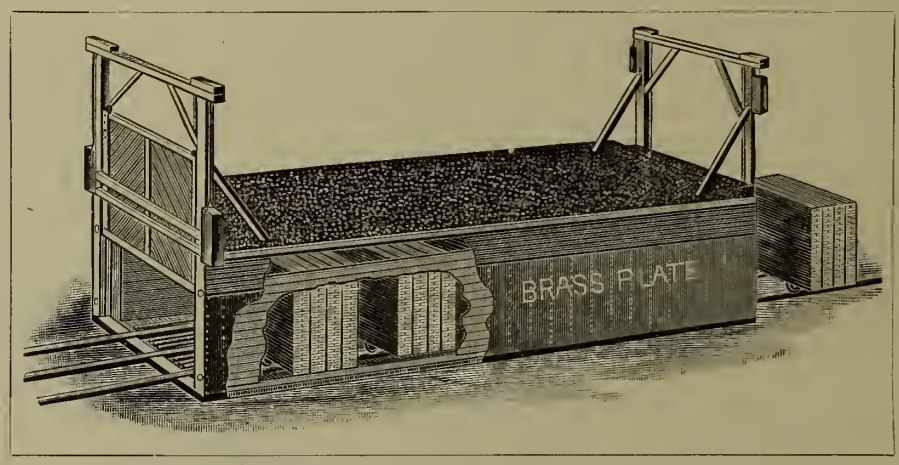

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TORONTO, ONT., JULY, 1892

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NOTE—Mr. Torrey is U. S. Assayer, and has been in U. S. Mint service at New York for 30 years.

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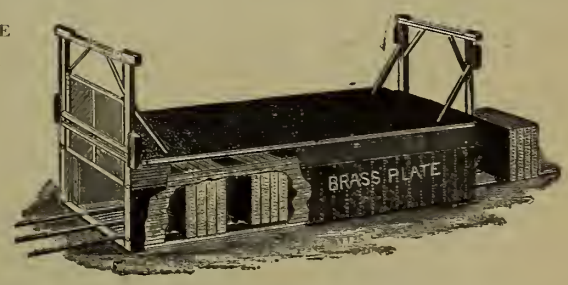

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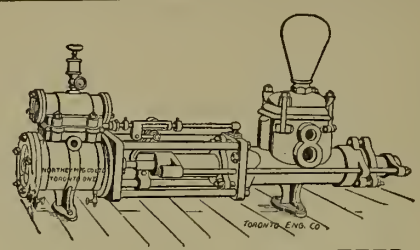

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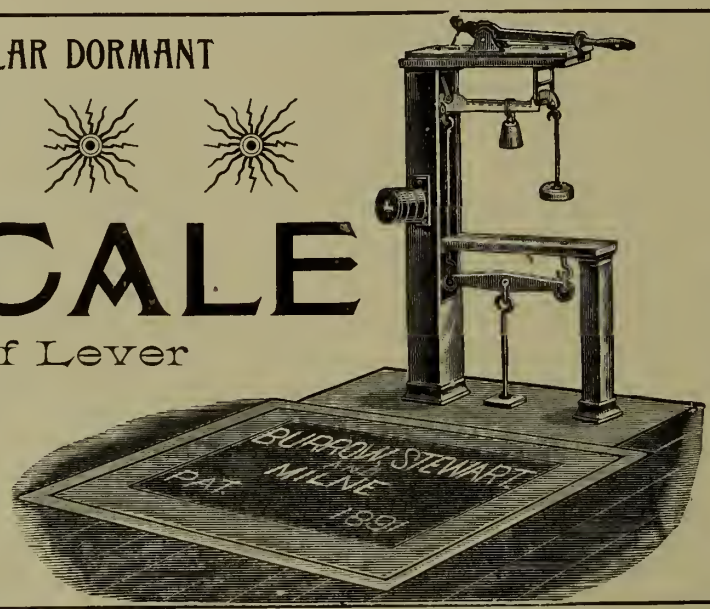

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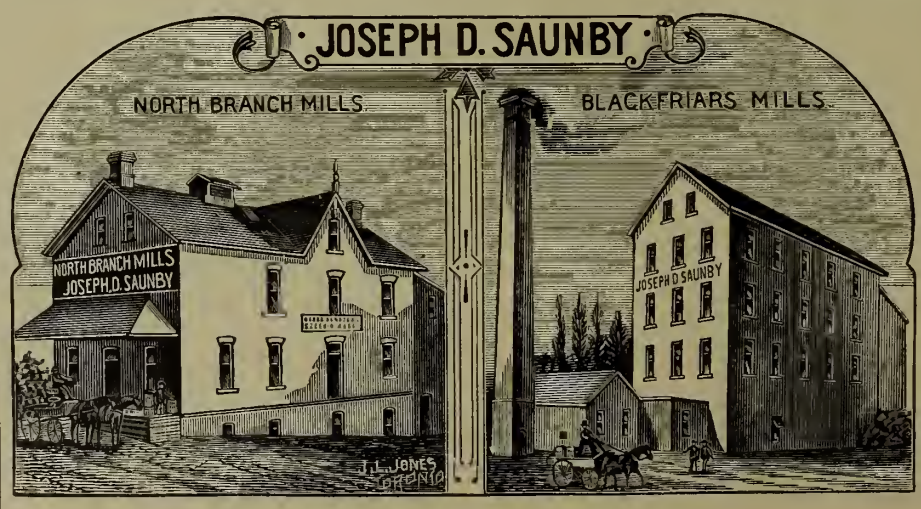

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THE CANADIAN MILLER

Old Series, Vol. X. } Number 7.
New Series, Vol. II. }

TORONTO, ONT., JULY, 1892

{ Terms, $1,00 Per Year
{ Single Copies, 10 Cents

NEWFOUNDLAND'S DISTRESS.

AT this date we do not suppose that there is a reader of the CANADIAN MILLER who has not heard of the terrible fire that on the 8th inst. visited St. John's, Nfld., laying in ashes almost the whole city. The more recent reports that have come from the scene of disaster indicate that the first news received, in place of magnifying, inadequately portrayed, the true situation. The whole of the business part of the city is destroyed. Every lawyer's office, doctor's residence and office and Protestant clergyman's residence was burned. Every daily newspaper and every printing office was destroyed, not enough type, paper or ink remaining in the city for a single poster. But, great as has been the loss from the destruction of the business part of the city, the greater distress has come from the devastating work of the flames among the homes of the people. Fourteen thousand people are homeless and five thousand are in absolute distress. Not a few lives are already known to be lost; starvation, and disease that stalks hand in hand with famine, threatens hundreds of others. Careful estimates place the loss at $20,000,000, with less than $5,000,000 insurance.

The news of the calamity that has overtaken our sister colony had little more than been proclaimed to the public before this same public, callous and indifferent in many matters, moved as one man, and each section of the Dominion, without regard to locality, has vied with the other in deeds of kindness and love. Their near neighbor, Halifax, N.S., forwarded almost immediately a ship load of provisions. St. John, N.B., Montreal, Toronto, Hamilton, London—nearly every municipality has taken prompt and practical steps to relieve the distressed.

A MILLERS' MOVEMENT.

Within a few hours after the morning papers of this city had been read the CANADIAN MILLER interviewed a number of the local millers and found that they were at one in the opinion that a millers' contribution of flour should be sent to Newfoundland, and promptly made their contributions. A circular was also sent out from the office of the CANADIAN MILLER to leading millers throughout the country, who have been equally hearty in their response; and altogether up to the hour of going to press, less than three days after the movement was started, contributions as follows have been received:

McLaughlin & Moore, Toronto	10 bbls.
J. L. Spink, Toronto	10 "
Citizens Milling Co., Toronto	10 "
N. Wenger & Sons, Ayton, Ont	25 "
Dobson & Campbell, Beaverton, Ont	10 sacks
J. D. Saunby, London, Ont	15 bbls.
H. Brown & Sons, Carleton Place, Ont	20 "
R. B. Clement and others, Walkerton, Ont. and box of clothing.	20 "
James Goldie, Guelph, Ont	25 "
J. Knox & Co., Stayner, Ont	5 "
P. R. Hoover & Sons, Green River, Ont	1 "
John Hull, Lakefield, Ont	5 "
Elliott & Hawkins, Holland Centre, Ont	8 sacks

The CANADIAN MILLER, on behalf and with the warm approval of the trade, cheerfully undertakes this work. The Grand Trunk, Canadian Pacific and Intercolonial railways have agreed to carry all flour for the purpose free of cost. Vessel owners, it is expected, will be equally liberal in the matter of carriage from the railway terminus to point of destination.

Remembering this country's relations, past and present, to the ancient colony, and taking right cognizance of the connection between the milling trades of Canada and the prosperity of Newfoundland, it is peculiarly fitting that the millers of the country should take a distinctive position in this work of relief.

"He giveth twice who giveth quickly." Let those who have not already responded do so at once. Wire quantity, when shipped and how. The telegraph companies will make no charge for messages of this character.

Address shipments: "CANADIAN MILLER'S Newfoundland Relief, Toronto." These will be placed together and forwarded in one lot to St. John's, Nfld.

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Since sending out the circular to millers referred to in the foregoing, the Weekly Bulletin of the Dominion Millers' Association has reached us containing a notice from Secretary C. B. Watts, saying: "It would be a graceful as well as humane act for our millers to send contributions of flour to the sufferers from the St. John's fire," and instructing contributors to consign their shipments, if residing west of Toronto, to Newfoundland Relief Committee, Toronto, and if east of Toronto, to Montreal, "and advise me of amount of contribution." When the CANADIAN MILLER suggested a flour contribution from the trade Mr. Watts was one of the first interviewed and heartily concurred in the proposal, voluntarily agreeing to do everything in his power to further the scheme, adding: "In the Bulletin of this week I will insert a notice informing millers of the project and instructing them to address shipments to CANADIAN MILLER'S Newfoundland Relief."

We are sorry for Mr. Watt's sake that he has deemed it the wise thing to act in a manner altogether contrary to his own statement. We have no desire to take from him the glory that he may believe will come from securing one barrel or 500 barrels of flour for the sufferers of Newfoundland. We have an opinion, however, that glory obtained for sweet charity's sake is of somewhat shady quality. One thought only has moved the MILLER in this project and that has been a sincere desire to help a neighboring community terribly in need. Mr. Watt's Bulletin notice is apt to defeat to some extent this end in raising a doubt in contributors' minds as to what steps they ought to take in the matter. Assuredly the act was not "graceful" or courteous to the CANADIAN MILLER, which has always treated Mr. Watts with every courtesy and consideration. Not for a moment do we suppose the Dominion Millers' Association, nor its executive, has been party to this act.

DOMINION MILLERS' ASSOCIATION.

THE annual meeting of the Dominion Millers' Association will be held in the Board of Trade Building, August 2 and 3. Not since the organization of the association will a more important meeting have been held. For the first time the association will assemble as an organization incorporated by special Act of the Dominion Parliament. We believe the members take a just pride in being so constituted, recognizing the powers and influence the changed conditions give them; and they will be prepared to congratulate the executive on the manner in which the work of incorporation, not unset with difficulties, has been carried to a successful issue. By the time the annual meeting will have been held the new grain inspection act, concerning which we have something to say in our editorial columns, will have become law. We shall be prepared to write more exactly of the matter after we have seen a copy of the bill, but there is good reason to believe that in a large measure the wishes of the association have received proper consideration. Next to the duty fight, yet fresh in the memory of the trade, no greater victory in the interests of the milling business in Canada has been won by Canadian millers. Long and wearisome was the fight, but a righteous cause and John Bull persistency has conquered. Nor need we forget to mention the satisfactory solution of the Newfoundland difficulty, which has been reached since the members last met together.

The programme is not yet completed but we have reason to know that aside from the especial prestige that will attach to the coming meeting, for the reasons we have already mentioned, that it will be such that ought to make August 2 and 3, in Toronto, memorable days to every Canadian miller.

Under the heading of By the Way and also on the Mill Product page we have touched on several practical questions that might fittingly be taken up at the convention.

THE FLOUR PRODUCT OF BUDAPEST.

BUDAPEST, Hungary, can claim honest credit for the important inventions that within a period of twenty years have completely revolutionized the business of flour-making. The most important of these, as millers know, are the "middlings purifier" and gradual reduction system, and following these the substitution of steel rollers of various sizes and patterns for the old-time millstones.

In the July Century, Albert Shaw, who has made a study of civic government and the conditions and growth of the cities of both the old and new world, has an able paper on "Budapest: The Rise of a New Metropolis." Where, in the successful placing of the products of the mill, so much depends on the methods of milling millers will naturally be interested in this paper by Mr. Shaw.

Budapest is to-day the capital of a nation of seventeen millions of progressive and ambitious people. Forty years ago when Kossuth found refuge in America, after Hungary's struggle for independence, the sister towns of Buda and Pest, lying on opposite sides of the Danube, together had hardly more than a hundred thousand people. The consolidated municipality has now a population of fully half a million people. Mr. Shaw tells us that despite its rapid growth, a condition out of which so many evils of civic management frequently grow, that it would yet be hard to find another large town whose development has been kept so well in hand by the authorities and has been so symmetrical and scientific from the point of view of approved city-making.

Hungary is an agricultural country, rich in the outcome of the soil, and Budapest is the market for the farm surplusage. It is the grain-receiving point of Hungary, and, as one might suppose, it has been found an especially desirable centre in which to develop the business of flour-making.

The mills of the Hungarian capital are magnificent establishments, fitted up with automatic machinery invented and made in the city, provided with electric lights and well supplied with ingenious contrivances to prevent fire. Their finest grades of flour are sent to all parts of the world except America, and command the highest prices. Both the flour product and the general commercial movement of Budapest have at least doubled within fifteen years. The annual output of flour is not less than 5,000,000 barrels, and the industry seems not yet to have reached its maximum, two or three new mills having been built within as many years; but the profits of the companies have suffered much from American competition and from the recent high tariffs of Germany and France. About one-third the milling business of the city is run by steam. The oldest milling company doing business to-day is the Pesth Roller Mill Company, founded by Count Szechenyi in 1839.

KNOWLEDGE WILL TELL.

IF a miller does not understand his business and attempts to run a mill in competition with those who do he will find himself in the rear ten times out of nine.

BY THE WAY.

THOSE who have made a careful examination of the growing crop in Manitoba say that wheat has reached a length of not less than twenty inches and indeed is already commencing to head out. All the rocks of agriculture in the prairie province have not yet been surmounted, but a good lead has been made, and present indications point to an early harvest. This, however, is to be remarked that the wheat acreage under culture this year will be 40,674 acres less than last year. This is accounted for by the large quantity of unthreshed grain held over from last season preventing farmers from giving sufficient attention to fall plowing. In other cereals the reports tell of an increased acreage. About 30,000 more acres of oats are under cultivation than ever before. The acreage of rye is increased by 315 acres, peas by 1,633 acres, barley by 7,816 acres, corn by 1,725 acres, and the area under roots is nearly doubled.

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One is hearing complaints continually of the impurity, less or more, of the grain and flour exported from this side of the Atlantic. Between the trade on the Canadian side of the Chinese custom line and that on the 'tother side these doubtful honors are perhaps evenly divided. We have talked before in these columns of deceptive practices discovered in the shipment of both wheat and barley to Europe and in all cases the exposure has been to the prejudice of the whole trade—saints as well as sinners. It always will be so. If the punishment would fall alone on the heads of the guilty ones the case would not be quite as regretable, but it never does. An English contemporary, the British Baker, has been making the complaint that maize in considerable quantities has been found mixed with recent arrivals of American flour. The English miller buys flour, not a mixture of flour and maize, and the presence of this adulterant in American flour must certainly create a hurtful impression of the flours that are made in this country. It is foolish business all through. We may think that sometimes it pays to be tricky. We have our own opinion. On the lines we cite there is nothing either clever or paying in the business.

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There can hardly be any doubt that the Dominion Millers' Association will be called upon to protect their members against a system of fraud that is the vogue in certain parts of the Province of Quebec. Millers in Ontario have filled orders from Quebec dealers for given quantities of flour at prices as agreed. After the shipments have reached their destination word is sent to the shipper that the flour cannot be accepted at the price invoiced and some flimsy excuse is given for the action. The shipper is entirely at the mercy of the dealer who practices these tricks. He knows that demurrage charges are quickly placed on the waiting cargo. It would never pay to have the shipment recalled. This is known to the consignee, and he takes advantage of the situation, and, metaphorically, with bludgeon in hand, he says: "I will pay you such and such a price or you can keep your flour." These practices have been on the increase lately when flour prices have been on the decline. It will be readily seen at what disadvantage the honest dealer in Quebec is placed. His neighbor becomes possessor of flour which has been purchased, as a result of his dishonesty, at a price that enables him to undersell the other and yet make a profit. The honest man, to meet this form of competition, is obliged to sell at a loss, but sees no encouragement to continue trade on these lines. Here the Ontario miller is struck again. In a word, trade in Quebec is demoralized, and to remove the cause of the demoralization will be the work of the millers when in association assembled.

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A Manitoba paper draws a doleful picture of the losses of grain in that province. A plethora of good things is not always an unmixed success. The crop of 1891 was of a size and kind that sent a thrill of joy through the heart of every Canadian from ocean to ocean. But there has been some hollering before everyone was out of the woods. The amount of ground in the prairie province under cultivation was enormous and the yield per acre something unprecedented. The Manitobians, however, appear to have bitten off more than they could chew. Says our contemporary: "The management of such a quantity of produce was wholly beyond the means at the disposal of farmers. Help was costly and difficult to obtain; the inferior and undesirable reaping machines in use were continually breaking in the heavy grain and the labor of stacking was exhausting owing to the usual weight of the sheaves, while many farmers had from fifty to a hundred and twenty stacks to build. Before the large harvest was gathered and while many fields were still covered by stooks the winter set in with unusual severity, commencing with a violent storm that battered the stacks full of snow and made the work of threshing difficult if not impossible. The intense cold caused the weak and brittle metal of the threshing machines to give way as if the castings had been made of clay in a brickyard instead of being constructed in a foundry. Thaws, followed by frequent blizzards, made the stacks a sheet of ice, crushed by snow, with the tops only projecting from surrounding drifts. Threshing had finally to be abandoned after enormous quantities of grain had been rendered useless by the ice that became mixed when the sheaves were passing through the machines, and the work of reducing the stacks that should have been done early last fall is going on now on some farms." The attempt to overtake this work has proved ineffectual. Hundreds of thousands of bushels of grain have been so damaged by ice and damp that the whole has become heated and is now useless. The mistake is fortunately one that is not likely to be repeated; and the information that the acreage of wheat sown in Manitoba this year is 40,000 acres less than 1891 is evidence that our friends in the Northwest do not get caught a second time in a blunder. Similar conditions have existed in Dakota and Minnesota. The Market Record, of Minneapolis, says: "There is much disappointment in handling the grain carried over the winter in stacks or otherwise unthreshed. The early threshings came out quite well in quality. The later ones are bad. Elevator people have lost heavily on such grain, until now many will not buy the wet grain at any price. Others buy at low figures. Still with sales here at twenty to fifty cents there must indeed be a low price paid to farmers at points where the freight alone is twenty cents a hundred to ship it here. So much is offered the market is glutted. That is a cause of the extremely low price now." The Jamestown Alert, of North Dakota, says: "It is said that not one farmer in ten has secured a grade of No. 1 hard for wheat threshed this spring, where, had it been threshed last fall, such would not have been the grade. In fact much of the wheat has turned out to be rejected, and occasionally a lot has been heard of that has been graded No. 2 northern, which is a fair milling grade. The disappointment over this condition of affairs has been general. Much of this damaged wheat will be only fit for feed." But after all it is cheering to know that there was the plenty from which these great losses could be taken and yet plenty remain.

THE POWER OF WATER.

THERE are very many, generally unknown, peculiarities about water as a power-making agency, even to a great many mechanics that are quite efficient in practical hydraulic engineering. The spouting velocity of water is controlled by the same law as falling bodies. As an instance the spouting velocity of water under a 16-foot head is the same as that of a body falling 16-foot, that is, the velocity of the falling body at the end of the 16-foot fall is the same as the initial velocity of the spouting water from under a 16-foot head, both being 32.4 feet per second.

The velocity from under a 64-foot head is 64.8 feet. It strikes the careless thinker as being quite strange that water should have a spouting velocity of 32.4 feet from under a 16-foot head, and why 64.8 feet from under a 64-foot head, and each are apt to jump at the conclusion that as the head increases in height it loses relatively in power. That, however, is very far from being true. A 20-inch water wheel will yield eight times as much power under a 64-foot head as it would under a 16-foot head, but would, of course, use twice as much water. The power developed being always directly as the quantity of water used and the height of the head.

The square root of the multiple of increased height is the multiple of the increased spouting velocity. Thus, as we have seen, the head has been increased from 16 to 64 feet or 4 times, while the spouting velocity was increased 2 times only, 2 being the square root of 4.

The spouting velocities of streams of water issuing from under various heads is as the square roots of the heads; or, in other and plainer terms, velocities increase in exactly the same ratio that the square roots of the heads increase; and a convenient way to ascertain the spouting velocity of any given head is to take the square root of it and multiply it by the constant factor 8.1. As an example we will take a head of 16 feet, the square root of which is 4, which multiplied by 8.1 equals 32.4 feet the velocity of a 16-foot head. Again we have a head of 64 feet, the square root of which is 8, which, multiplied by the constant 8.1, equals 64.8 feet per second, the spouting velocity of a 64-foot head.

Now, if we take a 4-foot head as a basis and call its useful effect one, we are able to construct a simple formula for ascertaining the relative useful effect of any other head. First obtain the spouting velocity of the head as above explained, and divide it by 16-2 which is the spouting velocity of a 4-foot head; then divide the height of the head in feet by four and multiply the two together and the product will be the efficiency as compared with a 4-foot head. As an example take a 16-foot head, the spouting velocity of which is 32.4 feet, which divided by 16.2 equals 2; and 16 divided by 4 equals 4, which multiplied by 2 equals 8. Therefore, the efficiency of the 16-foot head is 8 as compared with one for the 4-foot head. Or again, take a 64-foot head, the spouting velocity of which is 64.8, divided by 19.2 equals 4, and 4 divided into 64 equals 16, which multiplied by 4 equals 64, the efficiency of the 64-foot head being that many times greater than the 4-foot head. It must be understood that the vents are the same in size in their calculations. As the size of the openings are decreased or increased the effectiveness is decreased or increased in proportion.

The result of these calculations are only relative to get at actual results. In any case we must know the actual quantity of water that can be used.

THE WATEROUS COMPANY.

A REPORTER noticed the Waterous team going to the station last night with two very large pulleys, with two men on the wagon painting them. This rather raised his curiosity, and, on enquiry, he found that this was a shipment of two 82 x 16 inch face grip pulleys, arranged to work on one central driver, fifty inches in diameter, being made for Hunt Brothers, of London, for their electric light plant. The order was received Monday, June 27, and the pulleys shipped last night, making just nine working days, out of which can be counted the holiday of the first of July, when the Waterous people excurted to Buffalo. When the mechanism of these pulleys is taken into consideration, it will be seen that this is very fast work. While on this subject, it might be mentioned that the Waterous people have shipped about twenty-five to thirty tons of these pulleys during the month of June, two of the largest shipments being to the Hamilton Electric Light and Power company, and the Kingston Light, Heat and Power company. The new feature of placing two pulleys on a double driver, economizing space, is highly appreciated by the electrical companies, who, as a rule, drive their dynamo from each side of their shaft, and crowd their pulleys as close together as possible. Several prominent electricians have (after a thorough examination) expressed their approval of the Waterous grip pulley, making the statement that they had not previously seen a pulley that they would care to attempt to use, and for that reason had not up to date used grip pulleys. The shipment just made to Hunt Bros. is the fifth to them of grip pulleys, they having some ten or twelve pulleys and couplings in use at their electric light station in London.—Brantford Expositor, July 7.

PREACHING VS. PRACTICE.

IT is one of the easiest things in the world to make a barrel of high-grade merchantable flour out of 4.10 bushels of wheat—with the mouth or pen. And one of the hardest things to make it with the mill.

VIEWS AND INTERVIEWS.

Bread Made of Blood.

Where next shall we look for the staff of life? Anywhere, we suppose, in Russia. Dr. Makarof has been making experiments in that country with the blood of animals in the manufacture of bread. He made a dough composed of two-and-a-half parts of rye meal and one-and-a-quarter of blood. This he baked, and so produced a very good loaf of bread, which was not only fit to eat, but also contained much more nourishment than ordinary rye or wheaten loaves. Dr. Makarof considers that some regulations should be issued to people who slaughter animals, requesting them to collect blood, which has hitherto been wasted, and send it to certain specified centres, where it could be made into bread and distributed to the peasantry in the grain, so that they are obliged to grind it down, and as in most of the districts there has been a great dearth of fuel, the baking of the bread has been a great difficulty, which in some cases has proved insurmountable.

The Other Side.

The article of Louis H. Gibson on "Winter-Wheat Flour in Europe," republished in the June MILLER from our new contemporary, Milling, and matter in a similar line, which the same writer has recently contributed to other journals, is vigorously criticised by the Kauffman Milling Co., of St. Louis. They want to know what difference it makes to Mr. Gibson, so long as the European buyer buys his flour from this side of the Atlantic whether he takes spring or winter-wheat flour. "We do not wish to detract from the merit of the spring-wheat flours," writes this concern, "but would respectfully request Mr. Gibson to kindly state (in view of the fact that winter-wheat flours are bringing a higher price to-day in all the principal markets in Europe and America) upon what grounds he bases his statement that he 'does not believe winter wheat generally has ever been milled as well as spring wheat; that the winter-wheat milling has always been behind that of the Northwest, and that winter-wheat flour would have a much higher place in the market if it were milled in the same spirit of enterprise and intelligence. Mr. Gibson does not seem to remember that the spring-wheat flours first got a foothold in the markets of America during a time when a very poor crop of winter wheat, of poor quality, had been raised, and winter-wheat flours were that year of an inferior quality, and now if there is a market in the world where spring-wheat flours to-day are selling higher than winter-wheat flours we do not know it. By consulting the principal markets of Europe we think Mr. Gibson will not find one wherein winter-wheat flours at present are not selling for more money than spring-wheat flours. At least, to the best of our knowledge and belief, this is the fact, and if it is a fact, why should the enterprise and intelligence of the winter-wheat miller in America be placed below that of the spring-wheat miller? This question is asked in all spirit of fairness." And commenting on this letter the Modern Miller adds: "This is a reasonable communication, and the grounds taken are well held. It is a mistake to assume or attempt to school the trade into believing anything but facts in a financial way; therefore it is useless to inform the trade, either domestic or foreign, that winter-wheat flour is poorer or possesses less value than spring-wheat flour. Facts are against such an assumption, and the quotations of to-day, like those of the past, prove this; and likewise make promise of the future."

A Millers' Creed.

Why not a millers' creed? The miller is a worshipping animal. At least the miller is a man. That is sure, and we have good authority for saying that man is a worshipping animal. Then why not a millers' creed? One miller, if no other, believes in a millers' creed, and has constructed one after this fashion: "I believe in the Great Creator of heaven and earth, and the Bible, inasmuch as it does not conflict with the True Short System. I believe that flour-making is a business and not a pastime, and that experimenting is the most expensive operation machinery is put to. I believe that cleanliness is next to godliness, and I deny that the "mills of the gods" were in any respect as good as mine. I believe that the miller who says that he knows all about the business is a liar, and, in the language of a much-quoted writer, "the truth is not in him." I believe in water power as a feature of economy, but I am not the kind of prohibitionist who waits for rain, hauls water or employs a poor dammed excuse instead of steam power. I believe in differentials and corrugations, and I admit that I don't know all about them. I believe it is wrong to spoil good wheat. I believe that wheat has whiskers and wind purifiers are a natural consequence. I believe in milling only good wheat after it has been well cleaned and paid for, as I desire, before making any breaks or purification, to know that the product of my mill is mine own. I believe in making flour that will sell, even though my head miller dislikes the finish, on the theory that the people know what they want and that I am no back number. I am an advocate of electricity that will electrify trade, but am not at all partial to the alternating current system. I believe a barrel of flour can be made from 4.14 of wheat, but I will not agree to recommend it, or promise to tell where the addition to the feed pile came from. I believe that wind is not a good mill power. I believe in reciprocity if I am allowed to arrange my end of the schedule. I don't believe all I hear about the export trade, and I am not spoiling to feed Europe, nor do I give credence to the rash sayings of statisticians. I believe I know a little something about my business, or I wouldn't have any; likewise my competitors are not all fools, or I would be doing all the business, which I ain't by several per cent. I believe in the "survival of the fittest," and I fancy I'm "in it," or I wouldn't be "on the map."

Flour Production In Manitoba.

With the large acreage of wheat grown in Manitoba it is to be expected that the people of that province would manufacture their own flour. In Winnipeg is located one of the large mills of W. W. Ogilvie whose fame as an extensive and successful miller is world-wide. In the country districts, however, the want of water power is a serious drawback to manufacturing of any kind and particularly to the production of flour. This is the view of the Pilot Mound Sentinel, which, as a local newspaper, has spoken in very distinct terms on the subject. This is what is said: "Manitoba is not possessed of any water power worthy of the name, manufacturing languishes in consequence and especially is the drawback felt in the production of flour in country places. When settlement was advancing in the eastern provinces, the situation was much better; there was good power, at intervals on every river and stream. A few hundred dollars were sufficient to erect a mill that would grind corn and wheat in a satisfactory manner. At such an establishment farmers had flour and meal made from their own grain, the miller taking one bushel in twelve as toll. In Manitoba the case is very different; flour mills are required in every district and are of such an expensive description that little profit is obtained either by the millers or their customers. The town and districts where the mill is to be erected generally give a bonus of a few thousand dollars, the mill costing, perhaps fifteen or twenty thousand dollars, then there is the cost of insurance, the interest on the money which is usually borrowed, there is attendance, fuel, and sometimes a difficulty in obtaining water, with the outlay for frequent repairs. Grinding in such a mill is of course expensive. If a farmer sells his wheat at fifty cents a bushel, it will take the price of about twelve bushels to buy a barrel of flour. If he pays for grinding the cost is considerable, and the farmer is often dissatisfied with the returns, especially when his wheat has been damaged by frost, although the miller may do the very best he can. The cost of grinding must always be high in a prairie country where there is no water power, and where fuel to produce steam is scarce and dear. Some relief might be obtained by using less expensive mills, and for country work, if wheat is fairly good, millstones would perhaps prove more satisfactory than rolls, as then every customer might have flour from his own grain. In seasons when there is no damage to wheat by frost the business of a miller would be more satisfactory to himself and to his customers than when he has to contend with inferior grain. During the few years when early frost has been so disastrous to grain fields the position of millers in country places has been most undesirable."

Certain Business Methods.

Perhaps in the good times to come, when Bulwer Lytton's "Coming Race" will have peopled this earth, or Bellamy's new world has been ushered in, excessive profits and excessive competition may be consigned to the limbo of the past. These two abnormal elements, in the opinion of the Bankers' Magazine, give rise to the various difficulties in production and exchange. The pity is, though the wish may seem chimerical, that we are not able to right these matters now, and not be obliged to wait for another generation, when the remedy will do no good, at least to those of us who are about here at the present time. Conditions are unevenly balanced. Constantly one end of the teeter and again the other is in the ascendant. The see-saw is not guided by any rules of a fair equilibrium. Is the trouble where the Bankers' Magazine places it? Our impression is that this journal has very squarely struck the mark. The reasoning is supported by the logic of a wise political economy and the lessons that one's own observation and experience teach. The journal in question says: "The profits from production and exchange in many cases are so great that those who reap them seek to produce and exchange beyond what may be termed the normal or healthful limits of society. That this remark is true is within the ken of everyone's experience. The modern machinery for forcing business in many directions furnishes abundant proof. The conduct of many producers and exchangers would seem to imply that men no longer had any wants; that production and exchange were not based on mutual interest, but could be affected only by the application of extraordinary energy. This seems to be the underlying idea in much of our modern exchange, and yet, as we have seen, it must be wholly false, or else our leading premise is erroneous. Another explanation for thus forcing business is the small profits, which compels producers and exchangers to increase their business in every possible manner in order to get enough to pay their expenditures and save themselves from bankruptcy. We are all familiar with the consequences of attempting to do business when insolvency is pending. All know what extraordinary efforts are often made in order to avert that event. How goods are pledged for future advances; how they are sold at very low prices and often at ruinous loss; how money is borrowed at high rates of interest; in short, all sorts of methods adopted in order to escape such an unwelcome fate; and the result of these things, of course, is most destructive to all legitimate business. Reasonable prices are destroyed, the entire market is demoralized, and, in fine, the whole process of production and exchange thrown out of gear, when the pressure to produce and sell originates from this state of things. And yet, in the past, a great deal of production and exchange has had such an origin; the unlucky are always with us, who, in trying to save themselves, too often draw many others nearer to the danger line than they were before. These, in brief are the leading explanations of the phenomena which we set out to explain. Men seek to produce and exchange beyond any rational desire, either to enhance their profits or to escape ruin. It is either a fight for too much or a fight for life. Probably society suffers more from the operation of the last cause than from the operation of the former; but in either case the suffering is great. Production and exchange should lead to no such results; these processes should yield mutual gains and pleasure. And they would if kept within proper limits. What produces so much loss and misery at the end is the extension of production and exchange beyond these boundaries."

LOADING GRAIN.

THERE is soon to be a change in the regulations governing the loading of grain on the steamships in the port of Montreal. Steamship men have for a long time been complaining that the regulations in regard to the fitting of the boats for the reception of the grain were too stringent and entailed too much cost on the steamships. They pointed out that the regulations here were much more severe than those enforced at any of the American ports, and asked the Board of Trade to modify the rules. The matter is now under consideration by the Board and the wishes of those concerned are likely in a measure at least to receive consideration.

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

MANITOBA GRAIN INSPECTION.

THE steady agitation that the Dominion Millers Association has kept up against the system adopted in the inspection of Manitoba wheat is likely at last to produce a remedy. Our friends in Manitoba have themselves come to recognize the justice of the complaints, and are learning, as has been plainly recognized by the trade in the east, that Manitoba's interests are being injured by the system of inspection in vogue at Port Arthur.

The Winnipeg Commercial, which is to-day fighting the Port Arthur methods with as much vigor as has ever been employed by the CANADIAN MILLER or the Dominion Millers' Association, excuses its inaction until now on the ground that "grumbling from the east is looked for as a matter of course, and has on this account not received as much attention perhaps as should have been given to it." No pleasure was taken by any one in this part of the Dominion in persistently calling attention to this trouble, but it was a case where the evil protruded itself with such remarkable frequency that the grievance was, so to speak, before one all the time. Then it was an evil of an aggravated character and becoming more aggravated all the time. The sufferers were here, and when no effort was made to allay the suffering, where it might be allayed, the only recourse open to those injured was to fight on until victory was attained.

The Commercial gives away the whole charge of what it pleases to call "a chronic disposition on the part of our eastern friends to grumble," when it says, "complaints from the east and from abroad as to the grading of Manitoba wheat have been principally affecting Port Arthur inspection. Now it must be understood that the grain trade of Manitoba has no control whatever over the inspection at Port Arthur, though nothing but Manitoba grades of wheat are inspected at Port Arthur and Fort William. Inspection there is carried out under the rules provided by the Dominion Government, independent of the Manitoba boards of trade." If our contemporary will refer to reports of the meetings of the Dominion Millers' Association, which appeared in the CANADIAN MILLER of August and December, 1891, and April of this year, at each of which this subject was discussed, it will find that the charge of unfair inspection was laid at the door of the Port Arthur inspector and nowhere else.

Two circumstances have no doubt hurried Manitoba action in the matter at the present time: (a) The circular sent out by the Dominion Millers' Association in these words: "It is a notorious fact that nearly all the Manitoba wheat coming forward is much inferior to the standard of the grade at which it is certified. No. 2 and No. 3 especially are in most every case three to eight cents per bushel poorer wheat than are the Government standards of these grades. The loss of from $20 to $50 a car is thus sustained by the purchaser. We have so far been unable to get this unjust state of affairs remedied, but would strongly urge you to refuse to buy Manitoba wheat on inspection certificates. Buy by sample only, comparing it with Government standards, which is the only way you will get a fair value for your money. In this way it will not only prevent your being robbed but will probably lead to the inspection being made more satisfactory in the near future." (b) The complaints, to quote the Commercial, from the east, which have been much in excess of previous years, and complaints from New York and other export points as to the grading of Manitoba wheat, "some of which have been of a serious nature."

The reformer who leads in the vanguard of reform is at times likely to be misunderstood. We suppose that the trade in Manitoba may have considered that those in the east were pursuing this matter with unnecessary determination. They are now ready to admit that the importance of the case required it. Using again the language of our Winnipeg contemporary, we can say it is most important "to have the grading of our wheat above the possibility of undue manipulation and reproach. The reputation of the country demands this. The interest of our grain growers and grain dealers demands this. Our grain exporters, who ship upon certificates of inspection, have a right to demand that every possible security be placed about our system of inspection, so that there can be no possibility of tampering with the grades. Their business depends upon this, for if export shipments are below the grades which they are supposed to represent, the effect of this will be felt disastrously upon our exporters in time."

The whole country has too intense an interest in the success of Manitoba wheat to be else than jealous of any element that would prove prejudicial to its character. And the Dominion Millers' Association, in fighting its own battles as against Port Arthur inspection, has also been standing out just as boldly for Manitoba's interests.

Grain men in the east will cordially welcome as a friendly ally the grain men of Winnipeg in the steps they are now taking to "make such representation to the Dominion Government as in their opinion is necessary to place our system of inspection upon a sound and satisfactory basis." And it will be gratifying to them and the trade generally to know that the Government has finally recognized the serious nature of the trouble, and that a bill on the lines suggested by the Dominion Millers' Association is now before the Commons. We do not know just how completely the measure will serve to meet the whole case, but we have reason to expect that the Government will not any longer permit the looseness that has characterized the present system of inspection to prevail any longer.

BANK OPINION.

IT is doubtful if in any other way the financial situation throughout the country is more clearly and correctly focused than by means of the reports and addresses of our leading bankers, which usually come along about this time of the year.

Sir Donald A. Smith, president, and Mr. E. S. Clouston, general manager, of the Bank of Montreal, each delivered instructive addresses at the annual meeting of this bank, recently held. The occasion was the 74th annual meeting of the leading monetary institution of the Dominion. Illustrative not alone of the growth of the business of the bank, but also of the commerce of the country, for the two in this case go hand in hand, the president drew a contrast between the transactions of the bank in its early years, and those of to-day. In 1817 its capital was $350,000, and as there was no other bank in the country at that time this represented the entire banking capital of Canada, where at present the capital of the banks doing business in Montreal alone is upwards of $50,000,000. The capital of the Bank of Montreal is now $12,000,000, with a rest of fifty per cent., or $6,000,000.

The growth of the commerce of the Dominion during these years, and more particularly the past twenty-five years, is shown in a comparison of the imports and exports of this period, some interesting figures on this line being furnished by Sir Donald. In 1868 the total value of our foreign trade was $131,027,532. It has not always maintained an easy level, fluctuating more or less at times. The trade returns, however, for the fiscal year, ending April 30, show an extraordinary development as contrasted with the preceding year, the figures of the export trade being, 1891, $77,452,314, and 1892, $88,435,793, and this notwithstanding the McKinley Bill. So with the shipping. The month of May just closed shows an inward tonnage in the port of Montreal of 174,000 tons, against 132,615 tons in '91 and 157,000 tons in '90, or 17,000 tons more than in May, '90, which was the largest previous record. Throughout the entire address President Smith takes a hopeful view of the business situation, believing there are great things ahead for this Dominion.

Hardly running in parallel lines with this view is the opinion expressed by General Manager Clouston, but his remarks are none the less wholesome, even though in contrast with those of the president, decidedly pessimistic. Better times were expected when it was known beyond peradventure that the country had been favored with an exceptionally fine harvest, but Mr. Clouston says "we have experienced as dull, if not a duller, year than those preceding." The explanation of these hard times is attributed to the fact that farmers used what money was realized from the sale of grain for the payment of obligations due the loan associations, implement manufacturers and others. The residue of grain they have held in hopes of higher prices. "If, however," he says, "as it is supposed, there is still a considerable amount of grain in the farmers' hands, we are undoubtedly on a better and more assured basis, and with anything like a good harvest we may reasonably hope for some improvement in the future." Albeit, conditions would have been improved if the farmers had sold their grain earlier in the season instead of holding for higher prices, which have not been, or seem likely to be, realized, whilst the grain is suffering, in the opinion of those competent to judge, a depreciation of fully twenty per cent. from storage and attendant causes.

The deposits of the bank have increased largely during the year. In fact there has been, and is now, no lack of money in the country, but as Mr. Clouston remarks: "Cheap money is not an unmixed good, and is often a sign, as in the present case, of general distrust, and a widespread and far-reaching inactivity in business." The weak side of business in Canada to-day is the hesitancy exhibited, by those who have the money, to invest it in commercial undertakings. The general manager of the Bank of Toronto touched on the same matter in his annual address when he said: "The most conspicuous feature in the financial situation throughout the world has been the continual accumulation of unemployed money, which has been accompanied by a state of heaviness in general business, and an absence of new outlets for capital." And in this country, the Toronto manager goes on to say, this feature has "markedly characterized the business situation."

The one important article of confidence is what is most required to give healthfulness and tone to the commercial situation.

ONE QUARTER OF A CENTURY.

THIS month Canada has celebrated her twenty-fifth anniversary as a united Dominion. It is an experience of human nature that the forebodings of trouble that often take hold of the individual heart are seldom as black as they are first painted. No more can the picture drawn by the enthusiastic optimist be taken as real life. Rocks and quicksands covered the pathway of this young nation as she started on her journey twenty-five years ago—so prognosticated opponents of confederation. A future that could know few storms, made under a sky overcast with sunshine, appeared on the canvas touched with the brush of the over sanguine unionist. Neither picture has been true to nature. The history of these twenty-five years tells of difficulties that had to be overcome; but we are stronger as a nation to-day for having to work for what we have attained. Now we see clearer than ever before the great possibilities of this Dominion, and, pointing towards another twenty-five year milestone, we may, with Sir Donald Smith, "look forward to the fact that Canada shall within the next twenty-five years be a country not only of great importance, but very great importance."

CENTRAL Wheat Buyer Charles B. Watts says: "As a result of our representations re inspection of Manitoba wheat, the Government will investigate the first authentic case. I would strongly urge all millers who are not now buying their wheat on standard basis to start doing so at once, as I am sure there will be a lot of shrunken wheat this harvest which will involve the miller in heavy loss if bought straight basis, and it will cause bitter feeling amongst the local farmers if millers begin taking their light wheat standard basis after only paying them straight for all their heavy."

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"One thing," writes Mr. J. Clarke, of Moncton, N.B., "I think the Canadian millers could discuss with more or less profit, in conjunction with English, Scotch and Irish millers, and that is a duty on all flour coming from any country not British, but no duty on wheat going into England from any country. This would give large employment to millers in England and her colonies without increasing the cost of bread to the masses in England, as the competition between the home millers and the millers in the colonies would be sufficient to keep prices down to a proper level. This I believe should be the first stone to lay towards Imperial Federation. You know it to be a fact that there are sufficient mills in Canada and England to supply the flour demand, as the state of milling in Canada requires something to bring it into a healthy business, and that on the whole they do not run half time to-day. I trust the Dominion Millers' Association will take this matter up at its next meeting in your city, and pass resolutions and send copies to British associations across the water. I think 4s. per sack of 280 lbs. would be sufficient. Furthermore, I am firmly of the opinion that English millers will meet our millers with prompt action."

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President Hugh Baird, of the Toronto Board of Trade, does not often forsake, to quote our evening contemporary, The Telegram, "his usual unruffled mien"; but on 'Change a few days ago he let himself loose in expressions of protest at the manner in which Ontario breadstuffs were being decried abroad because of the dirty condition of the grain when shipped from here. He declared that a halt must be called. "I am no alarmist," he said, "when I tell you that this is about one of the most serious problems that the farmers of this country ever had to face. We are being discredited at home and abroad by sending dirty grain on to the open market of the world, and this must be stopped at once. Of course, apart from this, the trade will be ruined by the refusal of British importers to take Canada wheat altogether, but what with the infection of smut and the indifferent inspection the exporters on this side have already to suffer a surcharge of from 2s. to 3s. a quarter. This can and must be stopped if the farmers will only take the trouble to clean their seeding before sowing it. I am told that a solution of blue vitriol will effect all that is necessary. But, anyhow, I intend to take immediate action in connection with all the leading commercial bodies of the country."

* * * *

The Collingwood Board of Trade has passed a resolution commending the efforts being put forth by the promoters of the Ontario Ship Railway. Rochester business men are aroused on the subject, believing that the carrying out of the scheme would be a great boon to that city. President Max Brickner, of the Rochester Chamber of Commerce, in an interview says: "If the working of such a railway can be made a practical success, this particular route would be of inestimable value to the business interests of Rochester as well as of Toronto. It would shorten the distance from this city to the great lakes about 600 miles on the round trip. This would be a great saving of time and money in the handling of such an immense tonnage as would be offered for carriage. It would make Rochester one of the most important lake ports in the country and that would mean a large increase of our population and an impetus to all business enterprises can readily be seen." It had been the intention of Mr. David Blain, the chief promoter of the scheme, to have visited England with the purpose of raising the necessary capital to carry on the work, but in a conversation I had with him a few weeks ago, he had, in the meantime, abandoned this idea, believing that sufficient interest was being manifested in the States to secure the money there. It was his intention to interview leading New York bankers on the question.

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A travelling man for a large mill furnishing firm has come to the conclusion that "millers, like other men, have their superstitions, no more or less." "And strange to say," in his experience, "the millers' fear of the occult influences is more identified with the omens and prognostics of that day of the week called Friday than any other single thing connecting the understandable with the supernatural; yet the average miller indulges in about all the weird dictates that flesh is heir to." The following story told by this travelling man, to illustrate what he has already said, is narrated in the columns of our contemporary, the St. Louis Miller. Engaged to construct a certain mill, "we happened to arrive in the place," he said, "Thursday night, and next morning, Friday, I showed up at the mill early. The mill was a contract job and under a forfeit of $20 a day was to be done at a certain date, which had then transpired five days previous. I was ordered to the place by telegraph to 'make quick time—not to lose an hour in getting her under way,' and of course when I arrived I had a move on me. I hunted up the proprietor and introduced myself, at the same time requesting the presence of the boss millwright in the office. He came in at once, and I asked: 'Is she all ready to go?' 'She is,' replied he, 'ready since yesterday noon. My men are all ready to pack up and are remaining subject to your orders in case you want to make any changes.' 'Tell the engineer to get up steam,' I replied. 'Hold, McDuff,' said the proprietor, 'this is Friday, and if the court knows herself you don't start my mill up on Friday.' 'How about the forfeit?' I asked. 'The devil take the forfeit, it stopped yesterday. 'How about my expenses and the cost of keeping the millwright crew here?' 'How much is it?' he asked. 'About $60.' 'All right,' said the proprietor, 'I wouldn't have this mill started on Friday for five times $60.' We all adjourned to the Y.M.C.A. rooms (?) and spent the day, and started her up Saturday with a whoop loud enough to produce a shower had rain-making been fashionable at that time. At another time I had everything ready for a next day start, the next day happening to be Friday. It was six o'clock and our crew were all leaving the mill with the understanding that a start was to be made 'in the morning.' The proprietor called me to one side and said: 'Take just what men you require to start and I will give you all $5 apiece to make me a barrel of flour before twelve o'clock to-night.' We did it. It cost him $50, which he paid cheerfully, and said: 'I would have given $100 rather than have started to making flour on Friday.' Again, once on Thursday evening we had a mill ready to go, but the next morning the proprietor, who always locked and unlocked the mill for the crew to come and go, sent down word to the mill that on account of sickness in the family all work would be suspended at the mill for the day at his expense. That evening I got an invitation from him to attend a social hop with him and his wife. And notwithstanding the fact that I was paralyzed with surprise, I went. On asking about the sudden recovery of the sick that permitted their attendance at the frolic, the wife said: 'Oh, it was only the family dog that was ailing. And then, you know, Mr. Blank didn't want the mill started up on Friday.'"

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Spending a brief holiday a few weeks since in the Royal City of Guelph, I took advantage of the occasion to visit the Ontario Agricultural College, situated, as my readers no doubt know, about two miles out of Guelph. It so happened that I reached there on closing day and at the hour when the large gymnasium hall, recently erected, was filled with townsfolks and visitors who had been attracted thither by the closing exercises of the college. The proceedings were presided over by the principal, Professor Mills, and associated with him on the platform were the newly-appointed Lieut.-Governor, Hon. G. A. Kirpatrick, Hon. John Dryden, Minister of Agriculture, and many local celebrities. I think that with everyone there is a certain indescribable charm in attending the commencement exercises of a college. If one is young there is an inspiration in the presentation of medals and diplomas that sends the blood coursing through the youthful veins, for which one feels the better, even though an academic training may be something that has for some untold reason passed from one's grasp. If the years are growing on us we are apt to think of those of our own flesh and blood to whom we are striving to give an education in special and liberal lines; or the memory takes us back to the days of our own Alma Mater with their many and diversified associations. We are taken out of the rut and humdrum of everyday life, and life is the sweeter when its monotony is broken even for a brief spell. How true it is that the sins of the fathers are visited upon the children of the third and fourth generation, and, conversely, it is a fact, verified by observation and experience, that the better qualities of manhood and womanhood are impressed on those who follow after us in coming generations. I thought of this as I looked on the boyish face of J. A. S. Burns, of Halifax, N.S., who delivered the valedictory address. He was introduced as the son of the Rev. Dr. Burns, the well-known Presbyterian minister of the Maritime Provinces, and a grandson of Rev. Dr. Burns, at one time minister in Knox Church, Toronto, and for years one of the best-known faces on the streets of this city. We talk of heredity; in facial expression, carriage, manner, method, there stood the senior Dr. Burns in that boy. The boy was talking agriculture and not theology; but where else was the difference? Whether the grain we grow will rank as high grade or low grade, depends primarily on the seed that is sown. The flour we mill rests on the quality of wheat that reaches the rolls. The boys we raise depend on the fathers and the grandfathers who have gone before them. I have not donned the preacher's robes because perchance I am talking of a preacher's boy, but the thoughts are suggestive. They are not even foreign to the business of grain growing or flour milling. Principal Mills in his remarks told of the number of excursionists that had reached the farm during the month, from 300 to 3,000 in one day. Hon. John Dryden, a man whom honors do not spoil, one of the most practical and intelligent farmers in the province, gave sound advice to the young men who were that day leaving the college halls with diplomas in their hands. They should be close observers and constant readers of all that pertained to their work. They should not think that agriculture was all science; it was an art as well as a science, and the young men should apply the knowledge they had obtained in a practical manner. He advised them not to be ashamed of their business; it was as noble a calling as any, requiring the greatest amount of intelligence. Our Lieut.-Governor showed that he had kept himself in touch with the important interests of agriculture. It was now the chief industry of the province. He complimented the province on possessing an institution of the character of the Ontario Agricultural College, and told how Denmark, which had about the same population as Ontario, had, under the fostering care of its Government, so improved their butter-making that they sent to Britain last year $18,000,000 worth of that product. I have no space to tell of the pleasant hour spent in rambling through the grounds of the farm. The country around looked grand, and if no setback is encountered, one can believe, with the report of R. G. Dunn & Co., that the wheat yield will not unlikely approximate the unprecedented crop of 1891.

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C. A. Pillsbury, the big Minneapolis miller, says: "I have never sold a bushel of wheat short in my life. This has certainly not depressed the market. I have been called a gambler, and if my selling what I actually own is gambling, then I am a gambler. I believe I have done more to keep up prices for the farmer than any other man."

CLOTH AND FLOUR.

BY R. JAMES ABERNATHY.

THERE seem to be some very feeble notions extant in relation to the effect that the bolting-cloth may have on the rising qualities, otherwise the strength, of the flour. Some imagine that, if the cloth is too fine, the flour will be void of strength, will not rise well, and therefore will not make good bread. A little calm reflection ought to convince every thinking man that the cloth itself can have no influence in the matter. It can neither add to or take from the flour any of its natural constituents. Cloth simply separates the flour from the offal and divides the coarse and the fine. Whatever quantity of flour there may happen to be in a mass of chop material, that is fine enough to pass through No. 16 cloth, will be separated from the mass by the use of that grade of cloth, but does any one suppose for a moment that the mere operation of separating the fine from the coarse will rob it of any of its baking or other natural characteristics? Assuredly not. Cloth is simply an agent used in separating, and can have no possible effect either in favor of or against the flour, and all persons interested may feel easy on that point.

There was a time when it was thought and frequently said, and undoubtedly believed by many millers, that flour could be irretrievably injured by grinding. But that was when low and very fast grinding with buhrs was the fashion. It was thought that chemical changes, caused by the frictional heat, sometimes took place during the process of grinding, which injured the flour. The fact was never indisputably established, and whether it was true or not does not now matter, as the method of grinding and the supposed resulting injury have both passed away, and we are no longer interested in that part of the subject, further than to add that the recollections of the past may have something to do with the present idea among some, that the cloth has an influence in determining the natural condition of the flour, it being formerly supposed that the flour ground too fine was the most injured, which was undoubtedly true, if there were any changes on account of the engendered heat, as the closer the grinding the greater the heat, other things being equal. Close grinding required fine cloth, and now some retain the idea that, if fine cloth is used, injury may result.

It is true, buhrs are still used for grinding wheat in making flour, but not as formerly. Much less is ground in a given time, and the grinding is higher, so that there is no longer any danger of "killing" the flour by grinding. There is, of course, not the slightest danger of any such injury with the rolls, as the product is merely touched by them and no time is given for dangerous heating. It is not so much as to how fine or how coarse flour may be that millers must consider, but rather its evenness. We adapt cloth to the grinding, and if the intention is to make coarse granular flour, then we must use cloth coarse enough for the purpose. On the contrary, if fine flour is the object, then we must use fine bolting-cloth; but in neither case has the cloth any effect other than to perform its function. There is a medium that may be regarded a fair standard, and that is to have the finishing-cloth in a system of bolting about No. xx14. The trouble in having finishing-cloth very much coarser than that is the difficulty experienced in clearing the flour. It is likely, in fact almost sure, to be specky, a condition that decreases its commercial value although its bread-making qualities may not be impaired. If much finer cloth is used for finishing, then the grinding must be lower to suit, and there is a greater liability to unevenness in the flour, part being coarse and part quite fine, which does not work well, especially among domestic bakers.

Coarse flour needs more manipulating than fine, and when the two are together, the inexperienced baker, that is the domestic baker, is liable to have "runny" dough and bad bread, no matter how naturally good the flour may be. If irregular flour is sufficiently kneaded, not much trouble is experienced by baker of any kind, domestic or otherwise, but if not, the above indicated fault may as a rule be expected. And therein lies the trouble. The domestic bakers, as a class, do not like to knead dough very long, there being too much work about it, and then sticking—a mixture of very fine coarse flour—are most sure not to knead it enough to get the best results, and therefore make trouble for themselves and the makers of the flour, if in reach of said bakers. In view of the foregoing facts the miller will need to ask no questions nor borrow any trouble about fine cloths injuring flour, or expect that coarse cloth will make it any better. They should all aim to make it as nearly even as possible by adopting a standard about as here indicated. There is but little doubt that a straight flour dressed through extra heavy 13 and 14 cloth will come about as near meeting all requirements as any other standard that can be adopted. Coarse flour will be objected to because of specks, and fine because some will think there is not body enough.

REMOVING FUZZ FROM WHEAT BERRY.

BY H. E. TROTH.

AN old shoemaker once said: "Show me an old shoe and I will tell you something of the character of the wearer." This person had, undoubtedly, as he pegged, sewed, and twisted the tiny ends of the bristles on the well-waxed thread, been somewhat of a student of nature, and especially of humanity. The old shoes as they came to him to be repaired were indeed instructive object lessons. They presented many shapes and forms; some worn in one place and some in another; some with the heels turned in and some out. This diversity of effect must have had a corresponding diversity of cause, thought the cobbler, and he asserted that he found the causes in the different characters in the neighborhood.

The thoughtful, observing miller of to-day can, I think, with security say: "Show me the quality of wheat and the cleanliness thereof and I can determine the quality of the flour produced." The wheat in its natural condition, however good may be its quality and however thoroughly all foreign matter may have been eliminated, needs to be improved before it can be accepted as fit for reduction into flour. This has much to do with good yield and high quality of the flour made. Since the advent of rolls, purifiers and other machines that have tended to improve the quality of the flour, the first principle of good milling has in some degree languished, but at present this condition exhibits signs of improvement and millers are beginning to recognize the importance of having clean wheat. The extraction of cockle, cheat, rye and other matter that tends to depreciate the quality of the wheat is no more necessary than that the article should be thoroughly scoured and have all the extraneous fuzz and adhering dirt removed as nearly as possible. In proportion as this is thoroughly done so will the break flour appreciate. One has but to subject a grain of wheat to a test under a magnifying glass and it will be seen that it is as fuzzy as the upper lip of a sixteen-year-old lad. This condition usually remains the same after the wheat has passed through so-called cleaning machines, and how imperfectly the cleaning is done millers generally can attest.

That this extraneous matter will discolor flour cannot be denied. One has but to put a handful of wheat that has been prepared for grinding, on a clean, white cloth, and put water enough on it to thoroughly moisten it and then double the cloth around the wheat and rub briskly between the hands. After about two minutes of rubbing you will find that the white cloth has become very much discolored. Or, place the same amount of wheat in a small vessel with clean water and stir for a few minutes. Take out the wheat, strain the water through a very fine cloth to remove all fine specks. Then take some flour on a testing board and insert in the water, and if you are not very much surprised it is because you have a very good cleaning outfit. This extraneous matter can be removed, and will be, as the next step in advanced milling. There is no reason why the flour from the break rolls should not be as white as the flour from the sizing rolls, and if this can be accomplished the results will be much more satisfactory than they are at present.

The old design of scourers has been much improved. The upright machines are giving way to the horizontal ones, for most of the manufacturers of the uprights are making the horizontal ones. I believe that the horizontal machine will be the machine of the future. Some object to the horizontal machine because it runs a little harder than the upright; but, considering the efficient work and that it is easier and cheaper to connect to the mill and that swiftly revolving upright shafts are avoided, as are also the quarter-twist belts to which operative millers strongly object, the horizontal machine has decided advantages; and then, too, the power required to run it is proof of the work it is doing.

I was once in a mill where there was a horizontal machine, the first one I ever saw, and this machine was continually giving trouble. It would choke and the belt would come off. Of course this was very exasperating to the operator. One day the machine was giving more trouble than usual. The head miller's attention was called to the state of affairs, and after several attempts by that dignitary to make the thing go, and a few uncomplimentary remarks about the machines and the maker thereof, the millwright was called and the wheat spouted around it and the belt thrown off. In this condition did it remain until another man took charge of the mill and put in an upright machine. Subsequent events and experience has led me to the opinion that that was a much-abused machine. In the first place, I believe, the machine was put in without any regard to the capacity of the mill and the belt had not sufficient power to drive. These two conditions alone are enough to blast the reputation of the best machines.

No reason exists why the break flour should not be as white as that from the sizing rolls, as I said before, and it would be if the wheat was thoroughly cleaned; but this will not be accomplished by the present modus operandi, and there must be a radical change, and when this change takes place one-half of the machinery that is in the mills to-day will not be necessary. The future course of the miller will be to put his wheat in condition so that it can be milled at small expense and with as little loss as possible. He will not accept the wheat in its natural condition, and put in machinery to overcome that condition after it has thoroughly impregnated the whole mill. The expense of putting in a proper cleaning plant would not be so great as at present with the unnecessary amount of machinery now used, if the first condition of the wheat was improved. Nor would the cost of keeping in repair a proper cleaning plant equal the expense in adding new machinery to overcome conditions attributable to unclean wheat. That the outside coating and fuzz on the berry exists is a fact, and if it is allowed to get into the break flour it will greatly depreciate it. The only remedy is to absolutely remove it before it comes in contact with the break rolls. The advocates of sieve scalpers assert that that machine will prevent this, or much of it, from getting mixed with the break flour, and they undoubtedly do; but they cannot prevent the action of the rolls from doing so. So the only proper method is to remove this hurtful matter before it reaches the stage where its removal is impossible. This fact will not long remain a secondary consideration. The mill builder who recognizes it and will furnish a thorough cleaning plant, thereby making the manufacture of clean flour possible at a small outlay, will get the trade.—American Miller.

THE USE OF CORN IN GERMANY.

THE Indian corn crusade in Germany, as it has been termed by our American friends, is making considerable headway. Thirteen new mills have been put in operation for grinding corn, and the demand for the product is so great that some of them have been working night and day. In Dresden, where two corn mills are in operation, more than half the bakers are selling maize rye bread, composed of one part maize and two parts rye, in which the taste of the maize is not perceived. Even the two mills in the latter city, one of them T. Bienert's, the largest rye mill in Germany, are baking and selling large quantities of this bread, and the old government garrison bakery is turning out thousands of loaves daily. The Government is now putting in a corn milling plant in their large mill at Modgeburg, and a government report on the value of corn as food will soon be published.

BE TRUE.

TO the head miller: Do not on any account trifle with the confidence of your men by any species of misrepresentation or falsehood. One act of this sort begets others, invites imitation, and poisons that mutual trust which is the very life of business relations.

TO THE MILLERS OF CANADA:

This is WM. & J. G. GREEY'S page. You will know that by the tint, and while we are talking of tints, the tint of this page is typical. It signifies perfection, the "PINK OF PERFECTION," and that is what our machinery is. You only need to try it once to discover its merits. We make it a point to have all the latest ideas and improvements, and embody them in our machines. That is, as soon as we know them to be improvements. We do not believe in sending out untried or unproved machinery to vex our customers and cause them loss of time and trade.

In the line of proved machines the **"LITTLE WONDER"** Reel is away ahead of any Dresser for flour or for scalping or grading that has ever been put on the market. If you have any point in your mill that the separations or dress do not come up to your ideas, we will undertake to place a Little Wonder at that point on its merits. It never fails to satisfy the most critical and exacting miller, and will satisfy you if you will try it.

Now about Rolls. Yes, we do cast our own Rolls, and we will say this that we are making a Roll that is **UNEQUALLED** by any in the world. Why not? We have the **Best Material,** the **Knowledge** and the **Plant,** and what more is required? We have had our make of rolls submitted to the most severe tests as to hardness, toughness and uniformity of surface, and we know they are right, and guarantee them to be THE BEST.

Among some of the users of our make of Rolls are the following prominent millers, from any of whom you can get direct testimony as to their superiority:—W. W. Ogilvie, Montreal; Jas. Norris, St. Catharines; John Campbell, St. Thomas; J. D. Saunby, London; T. H. Taylor & Co., Chatham; Thos. McKay, Ottawa; H. A. Mulhern, Peterboro.

Then as to Adjustments for Grinding, why our new frame is superb, and the feeder, it will make you smile to see it work even on the most troublesome stocks. It will feed anything down to bran or flour as even as this sheet of paper. A true and perfect roll is absolutely essential and why not a true and perfect feed? We make both.

Do we make the latest improvements in Purifiers and Scalpers? Yes, we have the **GERARD AIR BELT ATTACHMENT** for the old style sieve purifiers, and we can assure you that more and better work can be done on fine ungraded stock on one good Sieve Purifier with this attachment than on any other. We also have the best regular air belt machine built. Write for particulars and circular about it.

Next month we intend to tell you something about our small mill plants and how to get the best value for your money; also something about cleaning machinery, bran dusters, mill supplies, etc. So look out for the "pink page" again, and meantime write us for anything in Flour Mill Machinery and Supplies, and a catalogue if you have not got one already.

WM. & J. G. GREEY 2 CHURCH STREET

TORONTO, ONTARIO

SUPERIOR

CHILLED IRON ROLLS

Fifty per cent. Harder than the Hardest Imported

At the same time . . . **EXTRA TOUGH**

ABSOLUTELY WITHOUT A FLAW We will replace free any of our Rolls in which a single flaw the size of a pin point can be discovered . . . . .

ALL STEEL JOURNALS

ADVANTAGES WITH THESE ROLLS:

RUN TRUER — DO BETTER WORK — CORRUGATIONS MORE DURABLE
LAST LONGER — COST LESS FOR REPAIRS — ALWAYS IN BETTER WORKING CONDITION

The discovery of a new process whereby the manufacture of Chilled Iron Rolls is governed at will, enables us to make Rolls of ANY DESIRED HARDNESS, and, at the same time, VERY TOUGH—results never accomplished hitherto. . . . . .

BEST YET

GERARD'S IMPROVEMENT

Dustless Air Belt Sieve Purifiers

Perfect Separation **Perfect Purification**

Upward Air Suction through Sieve
Dust Collected in Machine

NO DUST

No Dust Collector or Blow Room Required

NO AIR BLOWN INTO OR DRAWN FROM MILL
NO CLOGGING OF CLOTH

. . . SIMPLICITY COMBINED WITH EFFICIENCY . . .

CAN BE APPLIED TO PRESENT SIEVE PURIFIERS AT MODERATE COST

SOLE MANUFACTURERS FOR CANADA: **WM. & J. G. GREEY** 2 CHURCH ST. . . . TORONTO

CANADA.

JOHN JOHNS & SON, millers, London, Ont., have assigned.

THE Pacific coast will produce a good wheat crop this year.

THE stone for the grist mill at Wapella, Assa., is all on the ground.

SEVERAL new elevators are to be erected in the ancient city of Quebec.

WOLSELEY MILLING CO., grist mill, Wolseley, N W.T., are applying for incorporation.

HENRY WALLER is promoting a 100-barrel flour mill at New Westminster, B.C.

SHAW & DOUGALL'S grist mill, Hallville, Ont., destroyed by fire; no insurance.

A BONUS of $4,500 has been granted for the erection of a flour mill at Killarney, Man.

THE farmers are talking of putting up an elevator or mill this summer at Alexander, Man.

CORSON BROS., of Miami, Man., claim to have erected the first mill in that province this year.

W. B. MCALLISTER, of Pembroke, Ont., is about to erect an elevator of 200,000 bus. capacity.

SIXTY thousand dollars of stock has been subscribed for the new grain elevator at Kingston, Ont.

WHEELER & BROS'. mill at Cataract, Ont., was totally destroyed by fire. Insurance $20,000.

THE high water has been causing inconvenience to those using Lake of the Woods water power.

A FIFTY thousand bushel elevator is to be built by the Patrons of Industry at Boissevain, Man.

THE by-law to raise $5,000 for a flour mill at Hartney, Man., was defeated by a small majority.

B. FRASER is contemplating enlargements to the present capacity of his flour mill at Morden, Man.

THE flour mill of Wm. Moore & Sons, Meaford, Ont., furnishes the power that supplies the town with electric light.

THE new mill being built at Portage la Prairie, Man., by the Lake of the Woods Milling Co. is nearing completion.

WORK has commenced on Bateman and Chapman's elevator, Hartney, Man., which will have a capacity of 30,000 bushels.

STALKS of fall wheat five feet five inches are reported from Stanley, Ont. This class of items, like the egg stories, have their season.

THE Board of Trade, of St. John, N.B., will ask the Government to erect a grain elevator at St. John, the terminus of the Intercolonial.

SAMUEL MANN, of Stittsville, Ont., purposes erecting an extensive grain elevator. Mr. Mann is shipping large quantities of oats to Montreal.

ARMSTRONG'S grain warehouse, Oak River, Man., fell down recently, with 1,200 bushels of wheat. The warehouse is pretty badly wrecked.

DURING the past three months Messrs. Pickford & Black, of Halifax, N.S., have carried over 12,000 barrels of Canadian flour to the West Indies.

AN incipent fire occurred at the Goldie mills, Guelph, Ont., a few weeks ago. Owing to their excellent facilities of fire protection it was quickly got under control.

THERE is a grain blockade at Montreal, resulting from the absence of demand from England, where the people are too excited over the elections to attend to business.

VIPOND & Co., who have just commenced a direct line of steamers between Montreal and Jamaica, report the space on the outward trip of the first steamer as already engaged.

THE flour mill owned by Mr. Muir, of Shoal Lake, Man., will, it is said, be removed to Gladstone, providing a bonus is granted. Shoal Lake gave a bonus of $5,000 a year ago.

THE McKay Milling Co., at the Chaudiere, Ottawa, Ont., are increasing their capacity from 300 to 500 barrels per day and fitting up the mill with new and improved machinery.

THE last Manitoba crop bulletin complains of the presence of weeds of the noxious variety in many parts of the country. The most serious cases are in the east, in older settled districts.

IF negotiations for the erection of a large cleaning, handling and storage elevator at Winnipeg, Man., are successfully carried through the Canadian Pacific Railway will give the site free.

EIDT & WALPER, Dashwood, Ont.: We could not do without the CANADIAN MILLER. We see loads of good things in it.

SAMUEL COLE, a Canadian miller working in the Pillsbury mill, Minneapolis, Minn., has been compelled to give up stone dressing owing to his wrist becoming lame from handling the pick.

JOSEPH WOODRUFF, of Kingston, Ont., has left for Killarney, Manitoba, where he will build a flour mill with a seventy-five barrel capacity. He has been granted a bonus to establish the mill.

THE firm of Campbell & Stevens, millers and grain dealers, Chatham, Ont., has dissolved; H. H. Stevens retains the control of the business, to whom all the accounts due the late firm shall be payable.

THE North American Mill Building Company, of Stratford, Ont., are refitting the flour mill of Mr. J. R. Defoe, at Napanee, Ont., putting it in most thorough condition, including full roller process machinery.

THE steam barge Mary H. Boyes, from Chicago, unloaded 45,000 bushels of corn, the schooner Burt 28,561 bushels of oats, and the schooner E. B. Maxwell 25,000 bushels of corn at Midland, Ont., a week ago.

W. W. WATSON, grain broker, Winnipeg, Man., returned recently from a trip as far west as Virden. He reports the country as looking splendid. Plenty of threshers were at work between Winnipeg and Brandon.

"WITH wheat at seventy-five cents a bushel, the price of bread and other products keeps up pretty well. I had to pay eighty cents per hundred for bran," said a London man in the hearing of a Free Press reporter the other day.

N. BAWLF, grain dealer, Winnipeg, Man., is erecting a fine block on his Princess Street property, the buildings upon which were recently burned. The Board of Trade and grain exchange will occupy handsome quarters in the proposed building.

W. L. GRIFFITH, proprietor of the elevator at Emerson, Man., went to England during the early spring to make arrangements for direct exportation from his elevator to England. In this he was successful and is now making direct shipments on his own account.

THE Ladoga wheat growing on the side hill facing the south at the Brandon experimental farm, has a head already formed within the stalk, and Mr. Bedford, the superintendent, expects that it will head out early in July. This will be about as early as this variety headed last year.

J. S. LARKE, commissioner of manufacturing exhibits from Canada at the World's Fair, has had an interview with the Executive Committee of the Dominion Millers' Association, who appointed a committee to consider the best means of securing a fair representation of flour, etc.

TELEGRAMS have been received by the Department of Agriculture, at Winnipeg, Man., from Mr. McMillan, national Government agent at Liverpool, stating that Manitoba Red Fife wheat was awarded the championship gold medal at the International Millers' Exhibition, London, Eng.

ALFRED BROWN, an employe of the Waterous engine works, Brantford, Ont., was almost instantly killed on the 7th inst. A belt slipped off and carried him up against the shafting, crushing his head so badly that he died in a few minutes. He was one of the foremen, and leaves a wife and three children.

ROSS, HALL & BROWN, of Rat Portage, Ont., have put in a 500-horse power water wheel at their water power at Norman. Several inquiries have been received for power, which have led to this being done and arrangements have been made so that other large wheels can be put on as required. They expect at an early date to organize a stock company to erect a large flour mill on the property.

HAY BROS'. flouring mill, Listowel, Ont., was totally destroyed by fire on June 28; also the elevator which contained about 20,000 bushels of grain besides a large amount of flour in the elevator and mill ready for shipment. The fire was the work of an incendiary, the mill being fired in four places. Total loss on building and machinery, $20,000; insurance, $12,000. Total loss on stock, $18,000; insurance, $15,000.

Regina Leader: "The excellence of the wheat raised on our prairies has been many times demonstrated, but fresh testimony has just come into our hands which will be read by settlers in Assiniboia with interest and gratification. Some time ago the business men of North Dakota, realizing the importance of having first-class seed, made a careful enquiry in order to find what part of the North American continent was capable of raising the most perfect seed wheat, the qualifications being a large percentage of gluten, freedom from rust, smut, weevil or any other disease that wheat is liable to in Dakota, and that it be hardy and prolific. The wheat selected as the one pre-eminently possessing all those qualities was Assiniboia wheat."

THE Merchants' line, consisting of the vessels Magnus and Arcadia, has been established on the lakes. The vessels are in the Canadian trade between Port Arthur and Montreal, but will visit Superior for export flour as soon as negotiations are finished. The vessels are of capacity to take 1,250 tons to Montreal without breaking bulk. It is hoped to get a fifteen cent rate to Montreal on flour and if this is secured there may be a decided boom in flour shipments through the Welland canal and Montreal.

ABOUT a year ago F. F. Cole, of this city, contracted with Williams & Co., of Winnipeg, for the purchase of 3,000 bushels of No. 2 oats, delivery to be prompt. When the consignment was made, however, it was about a month late and lacked the inspector's certificate. On these grounds Cole refused to take the oats. After a long pending dispute the matter was submitted to arbitration. The arbitrators have just made their award, which is that Williams & Co. are not only not entitled to recovery from Cole, but that they must pay the costs, some $47, besides.

THE farmers and citizens of Portage la Prairie, Man., and vicinity have taken the preliminary steps to organize a co-operate milling company. It was reported that some 440 shares of $25 each had been taken up and fifty more shares will be all that is required to be disposed of. The meeting elected the following as a board of directors who afterwards elected their own officers: Thomas Sissons, president; Thomas Metcalf, secretary; William Fulton, Colin McKay, Charles Cuthbert and Charles Green. It is proposed to erect a 100-barrel mill here. An effort will be made to unite with the Farmers' Elevator Co.

GENERAL.

H. M. PHILLIPS, grain merchant, London, Eng., has been declared a bankrupt. Liabilities $915,810; assets $73,985.

SEVEN thousand acres of grain near Merced, California, were burned the other day, the loss being estimated at $100,000.

DURING the first six months of this year there were forty-six flour mills of various sizes reported built in the Southern States.

THE water power owner who closed his mill and put up the sign "DAM DRY, MILL CLOSED," has changed sign to read "DAMN WET, MILL CLOSED."

WHILE the Anti-Option Bill was under discussion Mr. Castle, of Minnesota, said he thought the bill should be entitled, "A bill to depress the value of all products raised by the farmers."

JOHN F. SUSAN, whose hasty blow ended the life of Chris. Biehlmeyer, a fellow employee in Dow & Sons' mill at Madison, Wis., pleaded guilty to manslaughter in the fourth degree and was sentenced to two years in the state prison at hard labor, with one day in each two months in solitary confinement.

WINDMILLS are of great antiquity, and are stated to be of Roman or Saracen invention. They are said to have been originally introduced into Europe by the Knights of St. John, who took the hint from what they had seen in the crusades. Windmills were first known in Spain, France and Germany in 1299.

A FREAK in the shape of an ear of corn has been found in Georgia. The ear is like most ears of corn in length and size, but at the butt end there are six other little ears, resembling human fingers, giving the appearance of an ear of corn grasped in the hand of a man. The small ears are from two to six inches long.

B. P. HUTCHINSON, commonly known to the grain trade as "Old Hutch," and who now deals in New York, has of late been devoting considerable of his attention to a restaurant which he has bought in that city. He proposes to institute radical changes in restaurant methods and prices, and his venture is being watched with interest.

THE London (Eng.) correspondent of the Northwestern Miller writes: "American flour in London and Liverpool continues plentiful and by no means active of sale, in spite of the comparatively low prices, both of patents and bakers' grades. One result of the cheapness of American patents, however, is the almost entire exclusion of Hungarian flours, which are far too dear comparatively, and which meet so little demand for export that Budapest millers have for some time been working short hours."

IN Great Britain there is an important movement of flouring-mills from interior points to seacoast points. The enormous railway freight charges makes it impossible for interior millers to bear the expense of moving imported wheat from the ports to their mills. By moving to the coast towns they avoid the expense of carrying the grain by rail, and that saving will carry the flour from the mills to the consumers. The English railways charge as much for moving a bushel of wheat 100 or 200 miles as it costs to move it from Duluth to Liverpool.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

MILLERS AND RAILROAD RATES.

THE Dominion Millers' Association, when in convention next month, might find a profitable subject for discussion, and action, in the methods of shipment and the uncertain character of freight rates charged by our railroads on grain and flour shipped over their respective roads. We cannot illustrate our meaning better than to cite a case that came under our notice within the past month. A miller doing business a short distance east of Toronto bought Manitoba wheat shipped from Port Arthur and paid for freight at the rate of nine cents per bushel. He learned that had the same wheat been billed to Montreal for export, carried at least two hundred miles further east, the rate would have been only six cents; on the other hand the miller whose abode should happen to be west of Toronto, perhaps London, would be charged at the rate of eight cents per bushel. Here are three different rates prevailing for carrying the same class of merchandise over the one road with the remarkable contradiction of ordinary business rules, that the greater the labor the less the cost. By what system of business metaphysics this basis is reached is beyond the ken of ordinary mortals. Some years ago, when millers were making a profit of forty and fifty cents on a barrel of flour, they would hardly trouble about a matter of two or three cents freight charges, indulging in nothing worse than an inward laugh at the absurdities of railroad methods, but in this day when the closest economy and prudent management is needed to work out a profit of any kind cents are cents, and even the railroads have to be watched.

The difference of three cents per bushel on wheat is large enough under present circumstances to operate measurably against the export trade in flour to Great Britain. The English miller can buy his wheat in Canada as cheap as the Canadian miller, and with the cost of carriage in his favor he finds in a depressed market that he can make flour of Canadian wheat in his own mill and compete quite successfully with his importer-neighbor, who has flour made in Canada to offer against the home product.

The grain and milling trades have a large interest in railroad methods however the question is viewed. Look at the matter as it appears in another light. The railroads have all along drawn a fine distinction between wheat shipped in its natural state and wheat shipped as flour. When a calculation is made for statistical purposes of the exportations of wheat we talk of wheat and wheat and flour together as one. But when it is a case of fixing rates on the two commodities an absurd difference is made. The ratio of twelve to nineteen as against flour is the rate in one case that comes before us at this moment. What is the philosophy of the distinction? We doubt if the answer can be made any more comprehensible to the lay mind, not conversant with the intricacies of railroading, than the recent magnanimous regulation of the Grand Trunk agreeing to carry wheat through to Montreal at the same rate as they are carrying it to Boston. Distance in certain cases would appear to be no object with railroad corporations, though at other times it is everything.

The suggestion has been made on other occasions that a Railway Commission, appointed by the Dominion Government, to whom matters of dispute and doubt could be referred, would remedy not a few of the absurd regulations which exists in railroading in Canada, and which calls for so much effort on the part of millers and the business community generally. Our millers when in convention in August might do worse perhaps than move along these lines.

ONE YEAR'S WORK.

The Millers' Tracing Bureau of the United States has accomplished during the first year of its existence everything, and even more, we opine, that its most optimistic promoters expected. Its operations date from July 13, 1891. Up to the 1st of May, 1892, the receipts of the Bureau were $1,763.76, and the expenses $1,644.18, showing a cash balance on hand of $117.58, besides $352.50 of a guarantee fund untouched. During this period flour shipments equivalent in the aggregate to 1,145,753 sacks of 140 pounds had been traced, which is at the rate of nearly a million and a half of sacks a year. In nine days, recently, orders for tracing between seventy-five and eighty thousand sacks were received by the Bureau. The membership is steadily increasing including the addition lately of the big Imperial mill, of Duluth.

Canadian millers are interested in whatever scheme can be shown to have been effectual in remedying in any reasonable degree the unfortunate delays at the seaboard that do so much to hinder a satisfactory export trade in flour, and it is for this reason that we chronicle occasionally the workings of the Tracing Bureau of the American Millers' Association, which is making a record for itself that is not devoid of many elements of practical success.

TRANSPORTATION TOPICS.

A knotty customs question has arisen in the case of the Canadian steamer Clinton which arrived in Chicago a few weeks ago. The Chicago Journal explains the situation thus: "The Clinton left Duluth about two weeks ago with 18,000 bushels of wheat for Europe via Kingston and Montreal. In coming down St. Mary's river the steamer struck a rock at Topsail Island and was beached to save her from sinking in deep water. The underwriters at Sault Ste. Marie now became the owners of the wet grain, and sold it to Armour & Co., of this city. But that lot of wet wheat is now very much like grain without a country. It could not be sold to Canadian distillers without paying the Canadian duty, and it now seems as if it can not be bought in the United States without paying a duty here. The only way it could have escaped the barbed wire fence of customs duties would be to have continued on its way to Europe, but by that time there would have been 18,000 bushels of fermented grain, which would have killed by its stench everyone on board the ocean steamer. It would not be surprising if the treasury department was called upon to make the ruling on the question, to come up here."

In discussing the important question of tolls on the St. Lawrence route, a matter vital to the grain shipping interests of this country, Mr. Thos. C. Keefer, who is a high authority on a subject like this, says: "The most dignified, as well as politic course for us in meeting foreign complaints of discrimination is to abolish all tolls upon the St. Lawrence route and make this river free not only to the United States but to all nations. This course should have been taken when the Erie canal was freed from toll, or when the Sault canal in Michigan was freed to Canadian vessels; and this course we intend to take with our own Sault canal when completed. The whole amount involved is less than half that which we pay to keep open the Intercolonial railway, and, judging from all precedent, there is every reason to believe that in a very short time the increase of commerce by the St. Lawrence route, which would be produced by this removal of all restrictions, would more than cover any loss of tolls." The Montreal Gazette is outspoken on this question, contending for "the concession of a rebate of tolls to all grain passing down canals to Montreal, no matter where transhipped."

The Monetary Times, discussing the canal question, points out that the conditions are now favorable for direct and continuous navigation between Europe and Chicago, by the aid of the Canadian Canals. "The Norwegian steamship, Wergenland, has passed through our canals on her return passage, on her way to Christiana. Captain Weise reports that the financial result of the venture is fairly profitable. Owing to the incompletion of the enlargement of the St. Lawrence canals, his steamer had to lighten part of her cargo at Kingston; it is expected that in 1894 the enlargement will be finished, and an expense of this kind will no longer have to be incurred. Part of the loss was in the delay which the lightening occasioned. The possibility of direct trade in future will depend upon the cost relative to that of other modes of conveyance. The enlargement of our canals alters the conditions of the problem. Already there is a call for still further enlargement, beyond the capacity to which our canals are now being carried. Before going any further in this direction it will be desirable to see our way clear, and whether there would be any profit in the enterprise for the country, which would have to pay the cost. No rival to the St. Lawrence route is possible; what nature has here done on a grand scale it is not in the power of art to imitate."

MARKET CONDITIONS.

One cannot say that the demand for flour is to any large extent on the increase, and yet the situation is an improvement over that of a month ago. Greater confidence in the future is manifest among leading men in the trade even though prices remain practically unchanged. Enquiries from Newfoundland are coming in, mainly for the lower grades, and a few shipments have been made. There is reason to expect a lively business with the ancient colony later in the year. W. W. Ogilvie, of Montreal, has made considerable shipments to Great Britain and the continent within the month, and other mills have not been altogether without an export trade. Recent reports from Minneapolis are not any too cheering. The weekly output of the mills is much in excess of the demand and mills are being kept running in hope of the situation improving shortly and thus prevent the necessity for shutting down. Prices generally are on the decline, certainly not as firm as the trade would hope for. This is the most discouraging feature of the situation.

PRICES OF FLOUR AND MEALS.

Quotations at leading market centres at time of closing this report are as follows:—

Toronto: Car prices (Toronto freights), Manitoba patents, $4.95 to $5; Manitoba strong bakers', $4.45 to $4.60; Ontario patents, $4 to $4.25; straight roller, $3.50 to $3.75; extra, $3.35 to $3.40; low grades, per bag, $1 to $1.50. The Millers' Bulletin says: "Sales: Straight grade at $3.85 and $3.90 per barrel; patents at $3.85, $3.90, $3.95, $4 and $4.10 per barrel, f.o.b. for lower provinces; latter for choice brands. Bran, $10.50 and $11 per ton, f.o.b. Good demand for bran for shipment to the United States during July, August and September." Oatmeal is, if anything, lower. Sales in car lots have been made at $3.40, and for smaller lots $3.50 to $3.55 has been paid.

Montreal: Flour: Prices as follows: Patent spring, $4.85 to $4.95; patent winter, $4.80 to $4.90; straight roller, $4.20 to $4.35; extra, $3.80 to $3.95; superfine, $3.25 to $3.50; fine, $3.10 to $3.35; strong bakers', $4.45 to $4.65. Oatmeal quiet, prices steady. We quote: Granulated, bbls., $3.90 to $4; rolled, bbls., $3.80 to $3.90; standard, bbls., $3.75 to $3.85; granulated, in bags, $1.90 to $2; rolled, in bags, $1.90 to $2; standard, in bags, $1.75 to $1.80. In bran and shorts a quiet local trade is reported. Quotations as follows: Bran, $14 to $14.50; shorts, $15 to $17; mouillie, $20 to $23.

Winnipeg, Man.: Flour: Prices to local trade in small lots per 100 pounds: Patents $2.30; strong bakers', $2.10; XXXX., $1.10 to $1.20. Bran, $9 to $10 per ton, and shorts, $11 to $12. Oatmeal: Granulated and rolled, $2 to $2.05. Cornmeal, $1.60 to $1.75 per 100 pounds. Split peas, $2.60 to $2.65 per 100 pounds. Pot barley, $2.60 to $2.65 per 100 pounds. Pearl barley, $4.20.

Jos. W. Kilgour, Mount Forest, Ont.:—"I cannot get along without the MILLER."

Office of the CANADIAN MILLER,
July 15, 1892.

THE GENERAL SURVEY.

ACTIVITY in grain circles is not an expected condition of the midsummer season. In a very significant sense it is the off season. What conditions will be later in the year rather than what they are now is the concern of any who are giving thought these days to business.

What is in the future? Are we to have a repetition of the wonderful yield of 1891? If so, what will be the effect of so large a yield added to the surplus grain still on hand? Prices to-day would seem to have touched bottom, unless the bottom itself is to give out; how will prices rule when the element of the new crop becomes a leading factor? What is the outlook abroad? How is the crop coming along in Great Britain, India, Russia, Australia? We are no seer and do not presume to possess any mysterious knowledge of the future. With all the influences that have been evolved from the science of hypnotism we have yet to learn of its magic touch holding sway over the elements of wind and rain, chinch bug or rust.

All the wisest can do is to patiently wait, hold to what we do know and apply to conditions as they develop from week to week a liberal supply of business common sense. Once all the main conditions gathered together it may be possible, if one's judgment does not become warped by the prognostications of some farmers' alliance, or by other crazy fad, to reach a fairly intelligent view of the situation. The "hold your wheat" experience of the farmers both of the United States and Canada has, we imagine, been of a kind to discourage any work along these lines in the future. All over the country trade is suffering because of the grain harvested in barns and elevators that ought to have been turned into gold six months ago and the money placed in circulation. The loss has not ended here. Within this time the grain has depreciated in value and quality to an extent that is to many in the business a matter of serious alarm.

BRADSTREET'S VIEW.

We do not know that Bradstreet's, in their recent summing up of conditions, have attempted any more than is here suggested. Quite likely circumstances will arise that will necessitate a revision in part of what is stated by this authority. Circumstances are uncertain enough to expect this. Yet as things are at this period their diagnosis will merit careful study.

It is taken for granted that the very favorable report as to acreage sown with wheat and the condition of the plant, which does not seem to have been seriously affected by so much rain, is a complete surprise to the trade. An evidence of this is indicated by the continued low prices that prevail, though Chicago grain men attribute the demoralization to the anti-option bill before Congress, which is an element of doubt at this writing.

Taking the United States Government totals of exports of wheat and flour as wheat for eleven months of the fiscal year, and estimating shipments for the month ending July 1, Bradstreet's places the aggregate exports of wheat for the twelve months at about 220,000,000 bushels.

"This total is by far the largest in the history of the country, the next heaviest year's shipment having been twelve year's ago, in 1879-80, a total of 186,321,000 bushels, or 34,000,000 bushels less than the probable aggregate in 1891-92. The average annual exports of wheat for the decade of 1880-89 was only 126,615,000 bushels, and from 1882 to 1891 the annual average was only 117,300,000 bushels annually, while for the ten years ending with the current cereal year the average yearly exportation of wheat is apparently equal to nearly 125,000,000 bushels, owing to the unprecedented shipment of the past twelve months.

"The statistical position of domestic wheat for the current year, based on the usual estimates as to rate of consumption per capita per annum, etc., may therefore be presented as follows:

	Bushels.
Wheat on hand, visible and invisible, July 1, 1891	32,000,000
Crop of 1891, as per Government report	612,000,000
Total supplies for 1891-92	644,000,000
Exports for 1891-92	220,000,000
Remained for use at home	424,000,000
Required for food and seed at home	362,000,000
Indicated reserved July 1, 1892	62,000,000

"The last total given in the foregoing table may be regarded as a minimum estimate, for it is quite likely that visible and invisible wheat in the country on the 1st inst. will aggregate fully 70,000,000 bushels.

PRICE OF WHEAT FOR A YEAR TO COME.

"Now that the Agricultural Department has put itself on record as pointing to a probable yield of wheat this year larger than in any preceding year except 1891, so far as may be inferred from the percentages given, perhaps 550,000,000 bushels—a question arises as to the probable supply of and demand for wheat here in the cereal year 1892-93. The preceding tabular exhibit contains one item, that of exports, which it is difficult to believe will be equalled in 1892-93, notwithstanding lately cabled reports from St. Petersburg that prospects in the Russian famine-stricken regions are worse than they were one year ago. But so far as may be judged in advance the outlook appears to be about as follows:

	Bushels.
Reserves, visible and invisible, (estimated) July 1, 1892	70,000,000
Crop, 1892, estimated as per latest government report	550,000,000
Total probable supply July 1, 1892	620,000,000
Required for food and seed, 1892-93	368,000,000
Remaining for exports and reserves	252,000,000

"It may be seen, therefore, that if required, from such a crop as the government report has just indicated, together with reserves twice as large as they were a year ago, the United States promise to be able to export 200,000,000 bushels of wheat in 1892-93, or, at a pinch, as much as they have shipped abroad in the cereal year just ending, and still be able to carry over reserves as large as we possessed on July 1, 1891. The question therefore naturally arises: Are we likely to be called upon to export 200,000,000 bushels of wheat in the next twelve months, in the face of an average annual export of less than 125,000,000 bushels for ten years just ended, which includes 220,000,000 bushels sent abroad within the past twelve months? Within the answer lies that which may make the price of wheat for a year to come."

WHEAT.

Exceptionally wet weather the past two months has given rise to many anxious thoughts among those interested in the growing grain; and who is not? Whilst in some sections we hear of damage done, principally on low land, reports generally do not point to the crops having been seriously injured. Unless there is a prolonged continuance of moist weather beyond the present the probabilities indicate a large wheat yield. In Manitoba, as we have pointed out elsewhere in this issue, the wheat acreage is about 47,000 acres less than last year, but the amount of unthreshed grain on hand is so large that the general crop will not be affected by the decrease. The acreage for other cereals has been increased. Official returns in the United States tell of an anticipated yield of wheat not far short of a year ago. In Great Britain the reports are favorable to a good crop. Prospects are improving in France and Germany. Austro-Hungarian authorities complain of rust and mildew. It is difficult to arrive at safe conclusions of the outlook in Russia, reports being contradictory. The report of the Indian Agricultural department is the least cheering of any. In Bombay the acreage under wheat in 1891-92 was 2,620,000 acres, against 2,864,000 in 1890-91. The total out-turn is placed at 543,500 tons, compared with 750,200 tons a year ago. In the Punjab the area under wheat this year is set down at 6,223,600 acres and the yield at 1,392,100 tons, as against 7,074,000 acres and 2,071,200 tons in 1890-91. This year's yield is the lowest for the last seven years, with the exception of 1886-87, when the out-turn was 1,361,900 tons. Prices at time of writing are as follows:—American: Chicago: July, 77¾c.; August, 77c.; September, 77⅜c. New York: No. 2 red, 88¼c. in store and elevator; No. 3 red, 85¼c.; ungraded red, 75¼c. to 82½c.; No. 1 northern, 86¾c. to 87⅞c.; No. 1 hard, 90¾c. to 91¼c.; No. 2 northern, 80c. to 81c.; No. 2 Chicago, 85¼c. to 86¼c.; No. 2 Milwaukee, 82¼c.; No. 3 spring, 79¼c.; No. 2 red, July, 85¼c.; August, 85c.; September, 85½c.; December, 88½c. Milwaukee: July, 74½c.; September, 75½c. St. Louis: July, 76½c.; August, 75c.; September, 76c.; December, 79⅜c. Duluth: No. 1 hard, 80¾c. for July; 80¼c. for September; No. 1 northern, 78½c. for July; 78c. for September; No. 1 northern, 78½c. for cash. Canada:—Toronto: Fall, 76½c. to 77c.; No. 1 hard Manitoba, $1.01; No. 2 hard, 92c.

BARLEY.

Very quiet; enquiries for No. 3 extra, and 40c. offered outside: Montreal 50 to 55c. Oswego reports: Market for Canadian barley unchanged; prices nominal; no sales, receipts, or shipments.

OATS.

Somewhat easier, but hardly any business doing. Thirty-one cents has been offered here; Montreal 33 to 35c.; United States, 36½ to 38¾c.

PEAS.

A quiet market. Fifty-eight and 59 cents are local figures as far as figures are being talked; Montreal quotes 73 to 75c.

RYE.

Trade almost nil. Montreal quotations, 82c. to 84c.; United States, No. 2, 82½c.

PERSONAL.

General Bidwell, of California, the Prohibitionist nominee for the presidency, is a wealthy man who includes a flour mill among his possessions.

Daniel Smith, of Annan, Bury & Smith, grain merchants, St. Louis, Mo., is making an extended trip through the east and northeast, and will include Canada.

Mr. William Wright, of the milling firm of J. Wright & Sons, Owen Sound, Ont., is a subject of congratulation, being united in marriage within the past fortnight to Miss Annie Maud Dougall, of the same town. Brother dusties unite in congratulations.

Thos. A. Bellew has been admitted a partner in the firm of Sachse & Howard, flour merchants, of London, Eng. Prior to this he held a responsible position with D. & C. MacIver, shipowners and merchants, of Liverpool, and Carl F. Sodemann, who for some time has taken an active part in the conduct of the firm's business.

Joseph Williams, late head miller for Finley & Martin, of Lindsay, Ont., who died on June 2 last, aged forty-seven years, was a miller from his youth, and had held different positions of trust and importance in milling. He had been with Finley & Martin as first man for ten years. The deceased will be remembered by old friends of Whitby and Pickering.

John Brown, of the Citizens Milling Co., is just now in Manitoba. The current issue of the Winnipeg Commercial publishes an interview with Toronto's well-known citizen in which he is reported to have said: "He had expected that the Manitoba trade would be opposed to the eastern millers in their efforts to change our system of inspection, but he was gratified to find that such was not the case, as the Winnipeg grain exchange had already passed a resolution calling for reform in the same direction as that asked for by the millers. The millers asked that the system of inspection at Fort William should provide that wheat should go out of the elevator according to grade as it went in." Mr. Brown expects to spend a couple of months in the west looking over the country.

PROTECTION TO A LOTTERY.

The Quebec authorities are still fighting the several lotteries that have recently endeavored to do business in that province. The only one that is able to carry on business unmolested is what is known as the Province of Quebec Lottery, and which has been doing, so its many patrons affirm, a square business for years. This particular lottery is carried on not simply without the protests, but it has the legislative sanction, of the Legislature of Quebec. The case of the poor girl, Mary Donovan, of Montreal, who a month or so ago won the capital prize of $15,000, is one of the many instances referred to as evidence of the straightforward manner in which all promises made by this concern are kept. The drawings take place twice a month.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 12th of each month to insure insertion in the following issue.

WANTED.

A FIRST-CLASS MILLER AND MANAGER, to manage joint stock company mill (100 barrels capacity); also to take two or three hundred shares (shares $25), ten per cent. of shares called up. Must be competent man.

For further particulars apply to

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A FULL ROLLER FLOUR MILL, WATER power preferred. Address

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SITUATION WANTED

BY A STONE MILLER OF THREE YEARS' experience, in a roller mill of from fifty to two hundred barrels, where he could learn the business, with the chance of a steady position if both parties were suited. Best of references given as to ability and habits. Will go one month on trial. Address

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ROLLER MILLER WANTS OFFER. HAS worked in first-class mills of various sizes. Is accustomed to milling for the principal Canadian markets. Highest yield guaranteed. Excellent references as to ability and character. Place must be permanent. Only millers with complete roller plants need write. Single. Address

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ONE HUNDRED BARREL ROLLER MILL for sale, or partner wanted with a few thousand dollars capital, in a splendid section of Manitoba.

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FIRST-CLASS POT AND PEARL BARLEY Mills, Buckwheat Flour, Chopping, etc.; kiln for split peas; good water power.

There is good business done for years. A portion of purchase money can be left on mortgage for a term of years.

Reasons for selling, want to retire from business.

Apply to A. G. MORTIMER,
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ONLY $2,000

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Steam Grist Mill

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Which is less than price of boiler and engine. All in good running order. The nearest opposition being Petrolea, seven miles. Owner is not a miller and has other business. The mill will be sold for above price; also a loan of one thousand dollars or more can be got from the farmers, to be paid back in grinding, at a reduced rate, on condition that a roller mill is made of it. Only a small amount down required. Apply

R. WEATHERILL,
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FLOUR IMPORTING FIRM IN EAST OF Scotland wishes to open business with first-class firm of Canadian millers. Cif terms per direct steamers from Montreal. Unexceptional references to bankers and to leading millers in United States.

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INSURANCE—FIRE AND MARINE. MILLS, manufactories and merchandise a specialty. Telephone at my expense.

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FLOUR MILL ON WELLAND CANAL—FULL roller process, water power; capacity 100 barrels daily; good locality for custom or merchants' business.

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New Roller Mill and a Sawmill

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The Village of Lyndhurst is situate within 3 miles of a station on the Brockville, Westport and Sault Ste. Marie Railway.

For particulars apply to WOOD & WEBSTER or FRASER & REYNOLDS, Barristers, Brockville, or JOHN HOSKIN, Q.C., Toronto.

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The President in moving the adoption of the report, February, 1891, said:—

"I have, however, much pleasure in drawing your attention to the fact that the commission income alone, as you will see by referring to the Revenue Account, **exceeded the total claims for fire losses, a record, I believe, unprecedented in the history of any other fire insurance company either here or in the mother country.**

The assurers with this Company, since it was established in 1885, have already saved on the current exacted rates, upwards of **forty-five thousand dollars.**

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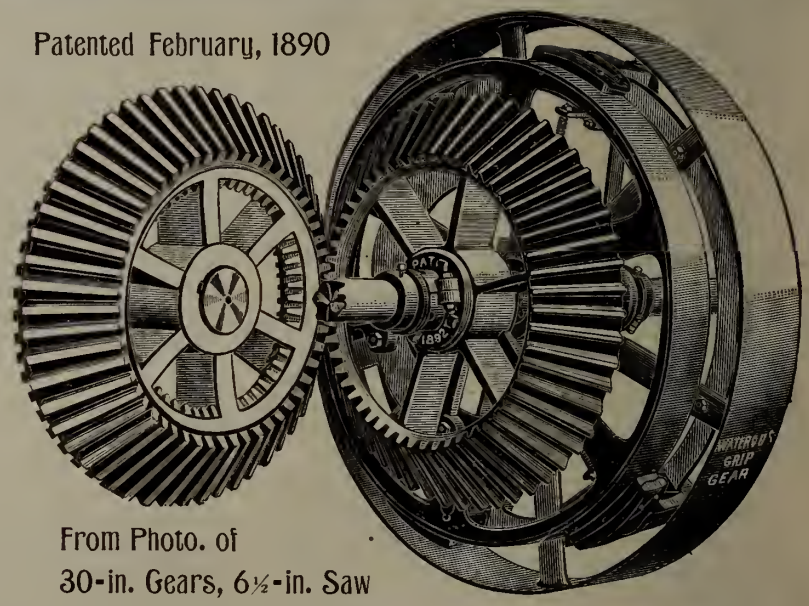

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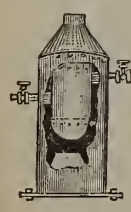

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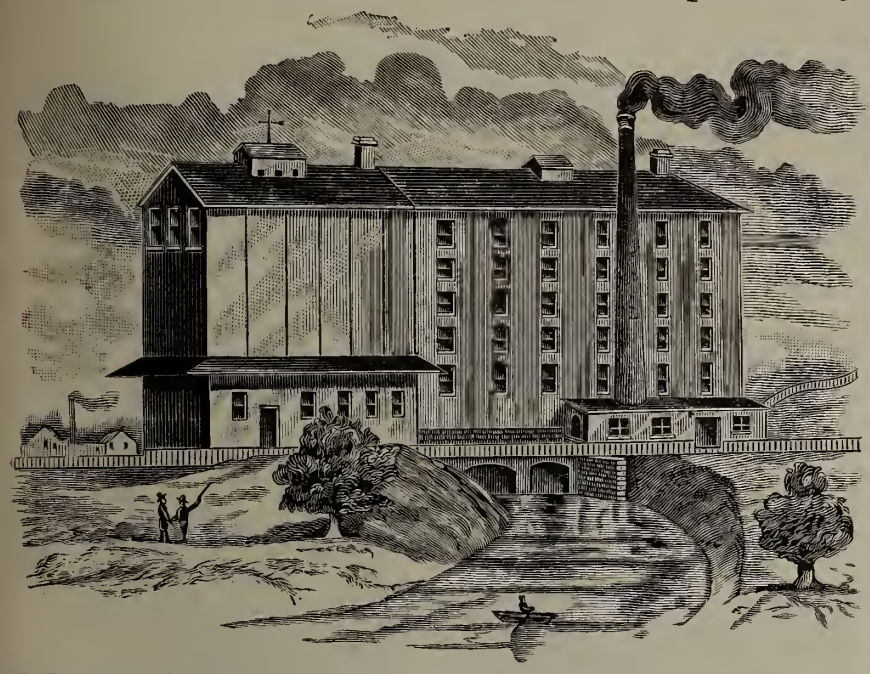

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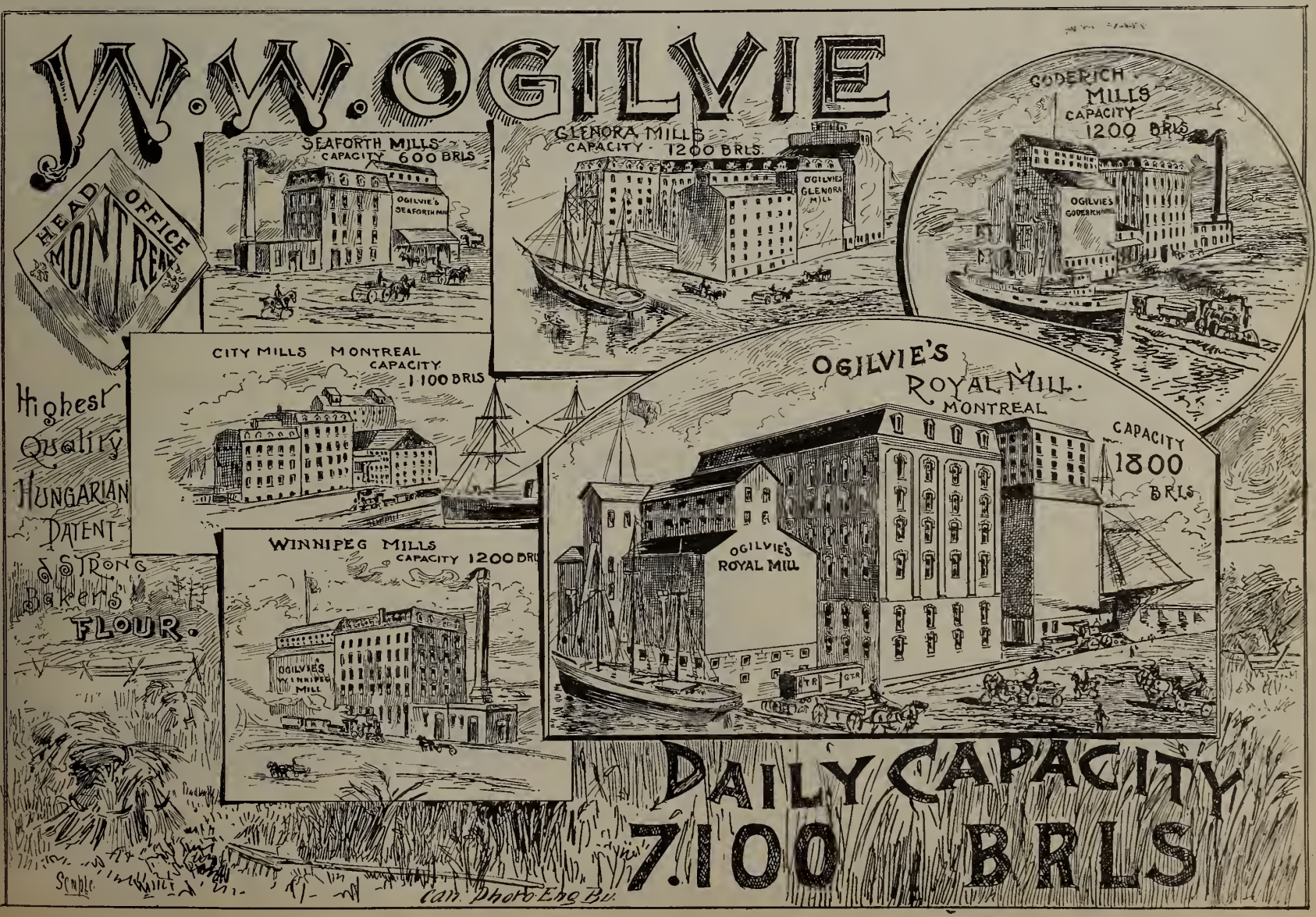
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When any mill can be shown completely equipped with any device yet known to the trade, whether imported from Europe or made in America, which can show better results than the mills above mentioned we shall find a way to keep to the front. Until such a mill can be shown, we shall hold fast to what we know to be good, and rest our claims on what is **NOW** accomplished, rather than on what **MAY BE** accomplished.

We stand ready to contract for flour mills of any capacity on the Allis system, using Gray's unequalled Flour Dressers, Centrifugal Reels and Dustless Purifiers, under a broad guarantee to produce **BETTER RESULTS** than can be produced by any other system whatever, using any machine or combination of machines, new or old. Our past work stands in evidence of our ability to fill this guarantee. On winter wheat as well as spring wheat Allis mills are producing results heretofore unequalled.

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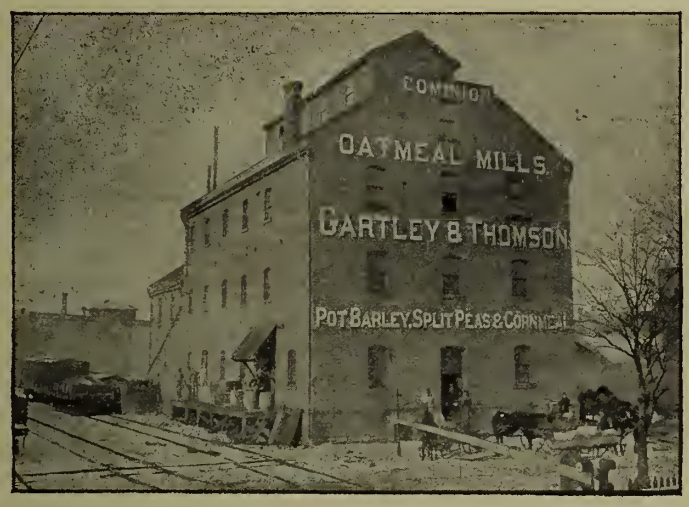

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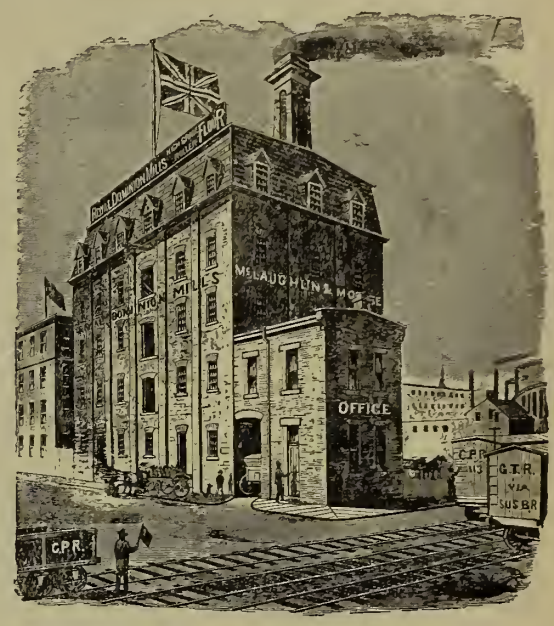

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OLD SERIES, VOL. X. / NEW SERIES, VOL. II. } NUMBER 8.

TORONTO, ONT., AUGUST, 1892

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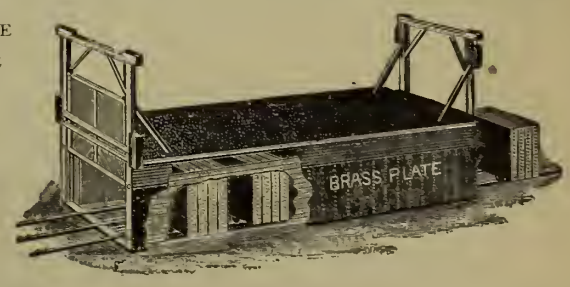

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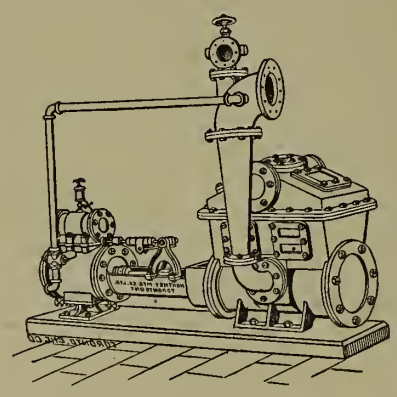

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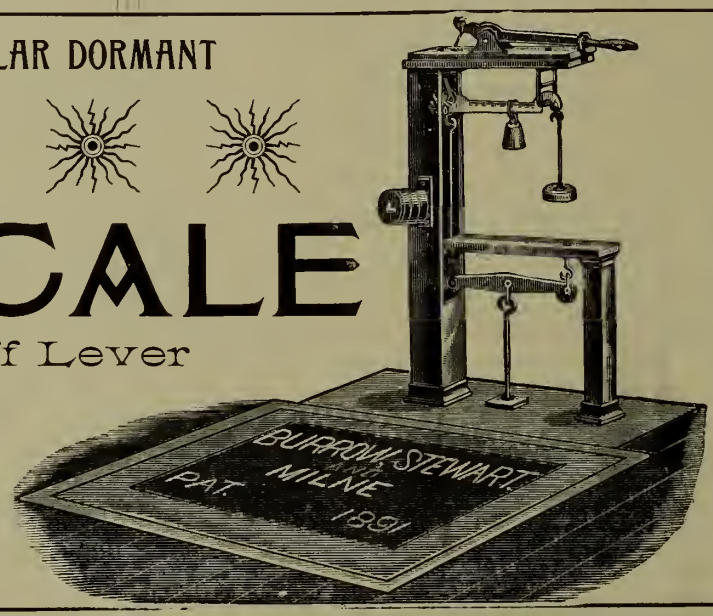

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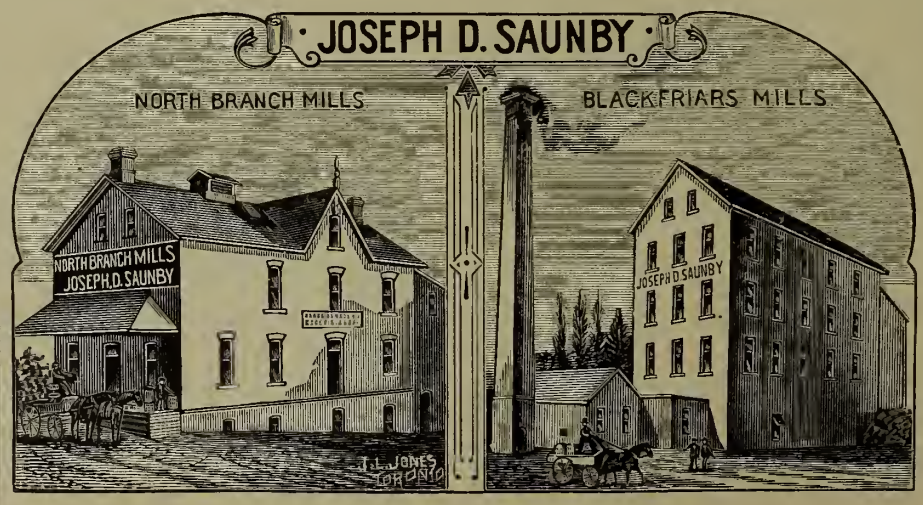

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Old Series, Vol. X. } Number 8.
New Series, Vol. II. }

TORONTO, ONT., AUGUST, 1892

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CHARACTER SKETCH.

MR. M. M'LAUGHLIN,

PRESIDENT DOMINION MILLERS' ASSOCIATION.

"For mine own part,
I shall be glad to learn of noble men." —Sbakespeare.

THOUGH everyone may not admit it, all are, unconsciously, if not knowingly, influenced by personal appearances and the manner of those with whom they come in contact in life. It was the late premier of the Dominion, Sir John A. Macdonald, who was wont to refer jocosely at times to his "winning ways" as the passport to much of his success as a politician and a man.

No one who knows Mr. M. McLaughlin, the new president of the newly incorporated Dominion Millers' Association, would for a moment suppose that he ties his faith to the Chesterfield doctrine, that "manners make the man." Yet who has not been attracted by the quiet, unostentatious, but hearty bonhomie of this representative miller, who couples with a pleasant manner a physical presence that marks him at once as a leader in any body of men.

It can without simulation be said that President McLaughlin is every inch a man—a manly man. How thoroughly this opinion is held by those who know him best is indicated in the action of the Millers' Association at its recent meeting in determinedly, and with united spontaneity, making him president of the Dominion Millers' Association, despite his own protests against assuming the position.

What does Mr. McLaughlin know of milling that he should be made the executive head of an organization composed of the most efficient and progressive millers one will find in any country? He is the son of one of the oldest living Canadian millers, who, sixty-five years ago, owned one of the first mills in Cardwell county, near Mono Mills, in our own favored province, and where, in 1847, the subject of this sketch was born. From his boyhood up Mr. McLaughlin has been engaged in milling. He knows its early history and the difficulties that beset the miller in those pioneer days. He has watched its progress since and few men have a better knowledge of the best conditions under which milling can be carried on to-day than Mr. McLaughlin.

In 1877, in company with Mr. Moore, the Royal Dominion Mills, Toronto, were purchased. It is an article of Mr. McLaughlin's business creed that to be successful in milling the miller must keep up with the march of milling improvements. He has put his belief into practice by making the Royal Dominion Mills one of the best equipped and most perfectly furnished mills in the Dominion. It may be remembered that in the CANADIAN MILLER of July, 1891, a history of the inception and growth of the Royal Dominion Mills, with illustrations, was published.

Whatever can be done to advance the interests of milling has always had Mr. McLaughlin's support. He starts at home by giving the closest attention to his own business affairs, and making that business an unquestioned success. But he does not stop here. It may be necessary to the existence of the species human that there be variety of kind. The "house on the brae," whose characters are so delightfully portrayed by J. M. Barrie in his "Window in Thrums," may provide outlook broad enough for some people, and Tammas, Hendry, Christy, and even Jess or Tibbie, are not unbeautiful characters. But these are not a people who have built up a great country like Scotland.

Perhaps the miller variety would not be perfect, even in the close of the nineteenth century, without ye ancient dusty, who still clings to his millstones of yore and who is seldom to be seen a dozen yards from his own milldam. We respect our venerable friend, but a broader mental view is needed to secure the changes in milling that have been an evolution of recent years. Nor would there be a Dominion Millers' Association with its splendid record of reforms accomplished, which has made life better worth living for every miller, were its members dependent upon the labors of ye ancient dusty.

Mr. McLaughlin takes a broad view of milling, and has never spared himself in any effort having for its object the up-building of the milling industry. He has traveled much in America and Europe and drunk of the liberalizing influences that come of meeting with others and learning what others know of life in general, and milling in particular. This information he has ever been ready to impart to others, and not, selfish-like, tie it in a napkin and closet it away.

In 1881-82 Mr. McLaughlin was honored with the presidency of the Toronto Corn Exchange. He was the first treasurer of the revived Dominion Millers' Association in 1889. When a strong directing hand was needed to fight the duty error Mr. McLaughlin was chosen chairman of the millers' delegation that kept up,

MR. M. MCLAUGHLIN.

during the parliamentary session of 1889, a fusilade on this subject that ultimately resulted, to the boon of the miller, in a satisfactory adjustment of the duties on wheat and flour.

We can understand with what enthusiasm a man of this character takes hold of the new work now laid on his shoulders as president of the Millers' Association. Let us quote one brief sentence of an interview when asked his opinion of this association: "I look upon the Dominion Millers' Association, with its 230 members, as such a power for good to the trade that no miller, small or large, can afford to stay out."

For a considerable time, in the early years of the CANADIAN MILLER, Mr. McLaughlin was a regular contributor to these columns. Increased business and public duties have for some time compelled him to lay his pen aside; but we voice the wish of MILLER readers that at an early day these pages will again be favored with contributions from his pen.

A native Canadian, Mr. McLaughlin has always been one of its most loyal and enterprising sons. He is full of faith in the future of Canada and a firm believer in protection to home industries.

MUMMY WHEAT.

IN regard to the propagation of wheat said to have been found in the cases of mummies, recent investigations at the British Museum have established the fact that the seeds are all in the same condition that the mummy itself is in. A writer in Notes and Queries says that as it would be impossible to stretch out the arm of a mummy, because the whole of the muscle was entirely burned up by the slow action of the oxygen, and it was completely rigid, so also it was with the whole of those grains of wheat and flax and various other seeds that were preserved—they were in the same condition. They had been subject to the slow burning action of the oxygen, and the whole of their vitality had disappeared. The little embryo was killed and the whole of life was gone. With regard to what was grown as mummy wheat, it was only a form of corn that was still extensively cultivated on the southern shores of the Mediterranean and was easily obtained from Arabs and others who were always ready to impose upon travelers who brought it home as true mummy wheat.

WHEEL PIT OF A NORWEGIAN MILL.

NORWAY is still the land of primitive habits and primitive things, and travel there is refreshing to one who is overdosed with modern progress. Some time ago a traveler described in The Miller, of London, Eng., a primitive little mill which he ran across near the shore of the land end of the Nordtjord, near Faleide. "About one mile from Vossevangen," he says, "is a mill with three run of stones, and of course three turbines. They were grinding oats and barley, mixed, into fine meal, and sacking up in goatskin bags, which seemed to keep the meal crisp and sharp. The two millers were delighted with my surprise when, on climbing down a hole into the 'cog pit,' as we should call it, and receiving a shower bath of spray from the spinning motors, I discovered them for the first time. The miller soon found out our communion of interest, though unable to communicate in speech, and seemed greatly pleased to show me the place; in parting they declined the offered silver, preferring only the hand-shaking of friendship.

Now, as to description. The water is conveyed down a shute, usually a hollowed out tree, and sent with great force on the blades of the motor, turning it like a whip-top. On the wooden or stone spindle and water wheel shaft combined is hung the stone on the 'one-horn' system. The damsel is formed by three willow sticks fixed in a beam overhead; they receive the motion by dragging on the runner stone, and communicate the jog to the stone by a cross-piece. A trough (and no 'hoops') completes the plant. The speed is regulated by the amount of water let on, and as the sizes of the stone vary in different mills, the miller regulates accordingly. Three feet in diameter is the common size, the dress in the stones ten threes in most cases. The mill is started and stopped by a sluice in the trough lifted up and down by means of a hand-pole reaching into the back of the mill. Here is glorious simplicity. No elevators to block, no dressing tackle, no bolting cloths or silks to burst, no ropes or straps to come off, no rollers to get hot or strip, or purifiers to attend, no smut tackle to waste the grist."

The writer states that the blades of the motor are fixed at an angle of 22½°.

A SURE WAY.

THE best test a miller can give his flour is the breading test. "Boning flour down," "doughing" it, and "dipping" it is all right for certain purposes, but the plan is not regular in its results, and hence is not altogether reliable, but if flour breads and bakes in a desirable manner to the customers who purchase it, the whole business is settled at one blow.

DOMINION MILLERS' ASSOCIATION ANNUAL MEETING.

THE annual meeting of the Dominion Millers' Association was held in the Board of Trade Building August 2 and 3. The attendance of millers from all sections of the country was unusually large and marked interest was taken in the proceedings from commencement to close. Prominent among those present were: M. McLaughlin, John Reed (Citizens' Milling Co.), J. L. Spink, William Galbraith and C. B. Watts, Toronto; Ed. Peplow, H. A. Mulhern, W. H. Meldrum, Peterboro; J. E. Pearen, Brampton; G. S. Baldwin, Aurora; E. S. Edmonson, Oshawa; D. S. Clemens, Winterbourne; James Stark, Paisley; R. B. Clement, Walkerton; George Shepherd, Primrose; J. D. Flavelle, Lindsay; Adam E. Ratz, Tavistock; N. Wenger, Ayton; F. L. Green, Greenwood; R. Rayburn, Deseronto; A. Dobson, Beaverton; Hedley Shaw, Brantford; E. D. Tillson, George W. Tillson and George Geddes, Tilsonburg; Thomas Elliott, Hampton; Fred Heimbecker, Hanover; John Brown, Dunnville; W. B. Robson, Hamilton; Thomas M. Syer, Thamesville; P. G. McCarghill, Mount Forest; F. W. Hay, Listowel; J. Knox, Stayner; J. G. Bechtel, Burford; Fred Rollins, Madoc; Robert Noble, Norval; A. Wolverton, Wolverton; H. Barrett, Port Hope; P. Kelly, Blyth; A. Moyer, Listowel; H. E. Macfarlane, Sherbrooke; James Hamilton, Glen Huron; A. H. Baird, Paris; W. H. Fennimore, Burlington; J. R. Dafoe, Napanee; James Calvert, Shedford; S. R. Shina, Caledonia; E. McKenzie, Kirkfield; J. A. Cox, Almonte; John K. Ford, Markdale; D. R. O'Neail, Paris; J. A. McDonald, Valleyfield, Que.; J. C. Vanstone, Bowmanville; James Hodd, Stratford; J. H. Drecass, Streetsville; Charles Smith, Campbellford; John Hull, Lakefield; H. B. Schmidt, Newtonbrooke; W. J. Taylor, Chatham; A. Plewes, Markdale; David Elder, Elder's Mills; Robert H. Vick, Orillia; James Goldie, Guelph; W. B. Robson, Beaverton; John Galbraith, Allandale; S. Plewes, Creemore; T. O. Kemp, Seaforth; E. Murphy, Mount Forest; H. J. Gould, Uxbridge; E. J. Breen, Uxbridge; Hutton & Carr, Winghain.

BILL OF INCORPORATION.

The act of incorporation under which the Dominion Millers' Association is now organized provides as follows:

The association may acquire and hold, under any title whatsoever, property real and personal, may alienate, sell and convey, lease or otherwise dispose thereof or any part thereof from time to time as occasion requires, and may acquire other property, real or personal, instead thereof: Provided always, that the clear annual value of the real estate held by the association at one time shall not exceed the sum of five thousand dollars.

The objects of the association are to promote, extend and improve the manufacture of flour and meal, the business of flour milling generally in Canada and the shipping and sale to foreign markets, as well as to the markets of this country, of grain, flour and meal, and to assist the members of the association with regard to the matters aforesaid, as provided by by-law, and to arbitrate, adjust, settle and determine controversies and misunderstandings between persons engaged in the said trades, or such as are submitted for arbitration as hereinafter provided; but nothing herein contained shall be construed as constituting the association a trading company, or empowering them to engage as a trading association in the business of buying and selling grain, flour or other merchandize; nor shall the association, by rule, regulation, by-law, or otherwise, fix or determine, or endeavour to fix or determine, in any way whatever, the price that the members or any of them shall pay or offer for grains in Canada.

The place of meeting of the association shall be in the city of Toronto, or such other place as is appointed by by-law; and such place of meeting shall be held to be the legal domicile of the association.

For the management of the affairs and business of the association there shall be an executive committee consisting of a president, vice-president, treasurer, and of such other number of members as is from time to time provided by by-law, all of whom shall be members of the association and shall be elected annually at such time and place, in such manner and under such regulations as are from time to time determined by the by-laws of the association; and in case of a vacancy, such vacancy shall be filled in the manner provided by the by-laws of the association; a majority or such number as is fixed by the by-laws of the association shall constitute a quorum of such executive committee for the transaction of business.

Such persons as are owners of a mill for the manufacture of flour or meal, or lessees of such a mill, actually carrying on the business therein, and such other persons as is by by-law hereafter provided, shall be eligible as members of the association.

An annual meeting of the members of the association shall be held for the election of the president and other officers of the association, and members of the executive committee, and for such other business as is brought before such meeting, at such time and place, and under such regulations and notices as are provided by the by-laws of the association.

The association, or the majority of the members present, such number being not less than twenty, at any annual or general meeting, may make and enact such by-laws, rules and regulations for the government of the association, providing for the admission, expulsion or retirement of members, the subscriptions and fees to be paid by members, for the calling of meetings, for the election and guidance of the president, vice-president and other members of the executive committee and committees, including a board of arbitration, and such other officers as are deemed necessary, and defining their duties and powers, and all other by-laws in accordance with the requirements of this Act or the laws of Canada, and for the carrying on of the affairs of the association generally, as seems expedient; and such by-laws shall be binding on the association, its officers and servants, and all other persons lawfully under its control; but every such by-law, and every repeal, amendment, or re-enactment thereof passed at any meeting, except an annual meeting, unless in the meantime confirmed at a general meeting of the association duly called for that purpose by giving ten days notice thereof, shall have force only until the next annual meeting of the association, and in default of confirmation thereat shall, at and from that time only, cease to have force.

The association may provide by by-law for the election, or appointment by nomination, of seven arbitrators, members of the association, three of whom may decide such controversies, disputes or misunderstandings relating to any commercial or other matters connected with the objects of the association which arise between the members of the association, or any persons claiming by, through or under them, as are voluntarily submitted for arbitration by the parties to the dispute, and may provide by by-law any form of agreement, or submission to arbitration, between its members, not contrary to law; and nothing shall prevent the parties in any case from naming members of the association, other than members of the board of arbitrators, as the arbitrators to whom the matter shall be submitted.

The three members appointed to hear any case submitted for arbitration as aforesaid, or any two of them, shall have full power to examine under oath (which oath any one of such three members is hereby empowered to administer) any party or witness appearing before them to be examined, and shall give an award thereupon in writing; and their award, or that of any two of them, given in such case, shall bind the parties according to the terms of submission and the provisions of this act.

All subscriptions of members, all penalties incurred under any by-law, and all other sums of money due by any member of the association, may, in default of payment, be recovered in any action brought in the name of the association; and it shall only be necessary to allege in any such action that the defendant is, or has been, a member of the association, and that he is indebted to the association in the amount claimed in respect of subscription, penalty, or otherwise; and a certificate, under the seal of the association, and signed by the president or vice-president and secretary, to the effect that the defendant is, or has been such member, and that he is so indebted as alleged, shall be received in all courts as prima facie evidence of such indebtedness.

The association may provide for the formation, in accordance with such rules and regulations as are adopted for the purpose, of branch associations in any city, town, county, or territorial division as to the association appears expedient, and may alter the organization of or dissolve such branches; but no such branch shall be deemed to be a separate association.

The association may suspend any member and debar him from the privileges of and incidental to membership, for such cause and in such manner as are provided from time to time by the by-laws of the association, and may also expell any member for such cause and in such manner as are provided from time to time by the by-laws of the association.

There can be little doubt that the interest taken in the proceedings of this year's meeting was greatly enhanced by the fact that incorporation had been secured and as a result enlarged and more efficient powers granted the association.

FIRST DAY'S WORK.

The meeting was called to order on Tuesday at two o'clock by Mr. Edward Peplow, of Peterboro, president. After reading and confirming of minutes of previous general meeting the reports of officers and special committees were submitted.

SECRETARY'S REPORT.

The report of the secretary, Chas. B. Watts, is as follows, and covers very fully the work of the office during the time of Mr. Watts' occupancy:

Having only been secretary during the past six months I am not able to give you as full a report as your late secretary would have been able to do, but I think that I am safe in saying that the work which has been accomplished during the past twelve months will be found as beneficial in its results to the milling industry as during any previous year.

During the past year four meetings of the association were held, that is, our annual meeting, August 4 and 5, a general meeting on December 8, and an emergency meeting on December 9, called by the president in reference to the Newfoundland duty on Canadian flour, and a general meeting on March 30, at which the proposed Act of Incorporation was passed.

The Executive held four meetings, September 15, February 25, March 8 and June 15, while sub-committees of the Executive having special charge of the incorporation met on October 15 and November 3. Also a deputation consisting of members of the Executive and the various Boards of Trade visited Ottawa on March 9 to confer with the Premier regarding the Newfoundland duty question.

During 1891 there were 186 millers who paid their fees, and this year our membership numbers 212 in good standing, being an increase of 26 members.

The treasurer, Mr. Galbraith, will lay before you his financial statement, and I am happy to say that the small deficiency which existed last year has been turned into a surplus this year, our assets being about $150 over our liabilities on the 1st of July, that is, not including the cost of securing our Act of Incorporation, which was $270, besides the lawyer's bill, the amount of which is not yet definitely known.

The act of incorporation, as approved at the meeting, March 8, was passed by the House of Commons with some slight changes and additions, which will be found in no way, I think, to curtail the usefulness of this association. Your secretary, as instructed by the president, appeared before the Banking and Commerce Committee of the House to meet and explain some objections which were made to the bill.

The duty of $1.05 per barrel which the Government of Newfoundland placed on Canadian flour, as against thirty cents on American flour, was reduced to thirty cents the last of May, thus placing our millers on equal terms with our American competitors, which result was no doubt owing very largely to the representations and labors of this association.

We also succeeded in getting the error in the standard of straight roller flour rectified, and the Government have made such changes in the Inspection Act that will no doubt result in this association having representatives on the Boards for selecting both flour and grain standards, which, with other changes made, will no doubt prevent similar errors occurring in the future.

The inspection of Manitoba grain has received much attention during the past year, as being a matter of the utmost importance to our members. On March 9 the deputation to Ottawa discussed the subject very fully with Mr. Miall, the Deputy Minister of Inland Revenue, and on May 17 your secretary again interviewed him twice, laying before him in writing the causes of the dissatisfaction existing and making various suggestions for the removal of the difficulties, many of which are already incorporated in the American laws dealing with the inspection of grain.

Last December a syndicate was formed consisting entirely of members of the association, and your late secretary, Mr. D. Plewes, was sent to Great Britain as their representative, which action no doubt will have good effect in bringing Canadian millers more fully before the flour importers of Great Britain, and thus have a beneficial result on our industry at large.

A year ago your secretary estimated the crop of Ontario wheat at 29,000,000 bushels. The Government returns have since reported that 32,500,000 bushels was the correct amount. He also made the crops of Manitoba and other provinces 26,000,000 bushels, making a grand total of 55,000,000 bushels. His estimated consumption for seed and bread based on 5,500,000 inhabitants for the Dominion was 33,000,000, leaving 22,000,000 bushels for export. In spite of this information being generally spread amongst our millers the price of wheat, for a large portion of the past year, has been above an export basis. Although from the information I have received I do not look for as large a yield as there was last year, yet the production will be so much beyond our requirements that with the large surplus still in farmers' and grain dealers' hands, carried over from last year, as against almost absolutely no stocks in hand on July 1, 1891, I think I am safe in estimating that the surplus for export during the current crop year will be larger than the estimate of 22,000,000 a year ago.

The following members have suffered the loss of their mills by fire: John Plewes, Salmonville; Messrs. McKay & Guest, Renfrew; George Easterbrooke, Tweed; Hay Bros., Listowel; Wheeler Bros., Cataract; but I understand that all excepting two are rebuilding.

Our late president, Thomas Goldie, Esq., of Guelph, died suddenly on the 3rd of February last, deeply regretted by all who knew him.

I have to report that the following names have been on the roll and received the Bulletin, etc., during the past year, but have not paid their fees: Messrs. Barclay & Matthewson, Cannington; John Cherry, Galt; Essery & Pakenham, Orangeville; J. H. Fleming, Dresden; A. Fair, Omemee; Flesherton Milling Co., Flesherton; Peter Griffin, Mount Vernon; Hartop & Argo, Elora.

The report was referred to a special committee, of which Mr. N. Wenger was chairman, who reported at a later stage of the meeting, commending the report and recommending that it be adopted. The motion was carried unanimously.

TREASURER'S REPORT.

The report of treasurer Wm. Galbraith was brief, but quite satisfactory to the members. Hitherto the treas-

urer has been obliged to report a deficit, less or more, at the close of each year. For the past year conditions were changed thus:

Receipts for year	$1,466 18
Expenditure	1,371 21
Balance on hand	$ 94 97

REPORT OF EXECUTIVE COMMITTEE.

Secretary Watts presented the following report of the Executive Committee, which, on motion, was unanimously adopted:

The Executive Committee met on June 15th, and we devoted considerable time to a discussion of the inspection of Manitoba wheat, and we instructed the secretary to issue the circular which the members have since received advising all millers to buy Manitoba wheat only on the sample instead of on the inspection certificate. The secretary having gathered considerable information regarding the American laws for the inspection of wheat and the working of the same, we instructed him to lay the matter fully before the Premier, Mr. Abbott, and forward him copies of the suggestions made. This was done and he promised that the matter would receive immediate attention, and, as certain changes have been made in the inspection law, we trust that there will be very little trouble in this respect in the future.

Messrs. David Plewes and A. K. Bunnell, of Brantford, were appointed as representatives of this association to the Congress of the Chamber of Commerce held in London, England, the last three days in June. Mr. Plewes spoke on Sir Charles Tupper's resolution favoring a five per cent. provincial duty in favor of the colonies and contended that this would not raise the price of breadstuffs to the English consumer to any appreciable extent. He also spoke at considerable length in favor of a bill of lading by which the interests of the shippers would he duly protected, and raised considerable enthusiasm amongst the delegates present. The results of this congress cannot but be beneficial to the Dominion of Canada and our own special industry. We present to you herewith the Act of Incorporation as assented to by the Governor-General.

In this connection we must place on record that we are deeply indebted to Mr. Stevenson, the member for West Peterboro, for his kindness in taking charge of our bill and getting it passed successfully in both Houses.

We also present to you herewith the proposed by-laws of the association under the Act of Incorporation and hope that they will meet with your approval.

The question of our association preparing an exhibit for the World's Fair at Chicago in 1893 was brought before the association by Mr. Larke, one of the agents of the Dominion Government to the World's Fair, and is a matter worthy of your consideration.

CENTRAL WHEAT BUYER'S REPORT.

The report of Mr. Charles B. Watts, central wheat buyer, is as follows:

It is now sixteen months since this office was opened, so I make my report up to July 1, that being the end of the financial year of the association. During this time 163 millers have patronized the office, three or four of whom are not members of the association, and paid double commission. Of these twenty-six mills made purchases for the first time through the office during the past seven months. The office has lead to a steady increase of the membership of the association, as no less than twenty-five members have joined directly through this office since it commenced operations, they finding it cheaper to join than pay the double fees charged to non-members. These millers evidently found it profitable to make use of the office, having in many instances made purchases before becoming members.

I am glad to state that a number of our millers have reported purchases not made through this office, requesting that the commission be charged them, prominent among whom I may again mention Messrs. Wenger & Bros., Ayton; also Messrs. Sadler, Dundas & Flavelle, of Lindsay, and S. R. Stuart, Mitchell, have made the largest returns, several others reporting smaller amounts.

The following are the purchases made since I last reported: December, purchased 59 cars of Ontario wheat, 82 cars and 10,000 bushels of Manitoba wheat, 8 cars of barley, and 1 of peas. Extra on wheat $2, and extra on barley $4.50. Total $472.50. January, 59 cars of Manitoba, 37 cars of Ontario, 1 of oats and 1 of bran; extra commission on Manitoba wheat, $21.47; total $301.72. February, 92 cars and 13 bushels of Manitoba, 52 cars of Ontario, 2 cars of barley and 2 cars of peas; extra on Manitoba wheat, $3; total $483. March, 74 cars of Manitoba, 48 cars of Ontario, 4 cars of peas and 1 car of beans; extra commission on peas and beans, $5; total $359.50. April, 80 cars of Ontario, 55 cars of Manitoba, making $365. May, 38 cars of Manitoba, 69 cars of Ontario, 4 cars of oats, 1 car of shorts; extra commission on oats and shorts $10.50; total, $309.50. June, 74 cars of Ontario, 30 cars of Manitoba; extra commission on wheat, $10; total $285. This makes the purchases for the seven months 419 cars of Ontario wheat, 466 cars of Manitoba wheat and 25 cars sundries, or 910 cars in all. These added to the 1,296 cars purchased during the first nine months makes a total of 2,206 cars purchased since the office was first opened. The record again shows that a large portion of the wheat was bought at considerable less than the prices at which the orders were given, it being my steady endeavor to purchase the wheat at the lowest possible prices for the patrons of the office. This has sometimes led to extra expense and considerable additional work, but I think the benefits accruing to the millers have fully justified the outlay.

I will now lay before you the financial results of the past sixteen months, which I trust will be found satisfactory, and I think will prove gratifying to those who advocated and had faith in what was considered by many a doubtful experiment.

EARNINGS.

Dec. 1, 1891.	To date as reported	$3617 30		
" 31, "	Commission for month	472 50		
Jan. 31, 1892.	" "	301 72		
Feb. 28, "	" "	483 00		
Mar. 31. "	" "	359 50		
Apr. 30, "	" "	365 00		
May 31, "	" "	309 50		
June 30, "	" "	285 00		
			$6193 52	
Less cars not supplied or refused			90 88	
			$6102 64	

EXPENDITURE.

Preliminary expenses (not included under other heads)	$ 58 94	
General expenses	133 84	
Furniture	283 35	
Stationery and Printing	75 93	
Stamps	371 23	
Telegraph	656 18	
Telephone	132 76	
Rent	330 00	
Wages	3046 85	
	$5089 08	
	$1013 56	

ASSETS.		LIABILITIES.	
Cash on hand	$ 7 64	Telegraphing, etc.	$ 22 77
Cash in bank	303 33	Open accounts	99 25
Dom. Millers' Ass'n.	234 30	Balance	1261 03
Open accounts	554 43		
Furniture, etc.	283 35		
	$1383 05		$1383 05

The above report shows that if the millers continue to purchase as freely through this office in the future as during the past sixteen months we have been charging fifty cents per car more than is necessary to pay the expenses of the office.

If the millers would only patronize the office to the extent of 2,000 cars a year, instead of 1,600 as in the past, a further reduction could be made of twenty-five cents per car, that is, it would only cost about $1.75 for Ontario wheat and $2.25 for Manitoba wheat per car. However, I regret to say that the month of July has proved a most disappointing one, the total purchases this month only amounting to 86 cars as against an average of 135 cars for the period reported above, thus showing a deficit for the first time since the office has been opened, excepting during the first month, when only 86 cars were purchased.

DISPOSITION OF CENTRAL BUYER'S REPORT.

Mr. T. O. Kemp, on behalf of the special committee to which was referred the report of the central wheat buyer, reported in these words:

The report shows an accumulation in sixteen months of a surplus of $1,261.03. Taking into consideration that all the preliminary expenses had to be met during this time, we feel that we can safely recommend a reduction in the charges for buying of fifty cents per car to members only, making the charge $2 for Ontario and $2.50 for Manitoba wheat per car. But this reduction applies to members only, the charge to non-members to remain as before. This reduction your committee anticipate will assist in increasing the business of the central wheat buyer's office to an extent that will warrant a reduction to one-quarter cent per bushel at an early date.

The report was unanimously adopted.

FREIGHT RATES.

A special committee consisting of E. Peplow, M. McLaughlin, J. Hodd, A. H. Baird, J. Brown, W. H. Meldrum, Geo. H. Harper and Secretary Watts, has for some time been giving careful thought to the question of freight rates. For reasons best known to themselves an invidious distinction has been drawn by the railways between the rates on flour and the rates on wheat. Some of the more glaring of these differences are pointed out in the following report submitted by the chairman, Mr. M. McLaughlin:

The committee first considered the freight rates of the export trade in flour from Manitoba wheat compared with the rate charged on wheat with the following results:—

Port Arthur to Liverpool wheat 13 cents per bushel, equals 21¾ cents per hundred.

Port Arthur to London, Ont., 8 cents per bushel, equals 13⅓ cents per hundred.

London to Montreal, regular tariff 19 cents per hundred.

For export no tariff (17th July new tariff issued 16 cents for export.)

London to Liverpool 23 cents (railroad portion, say 13 cents, steamship portion 10 cents.)

Port Arthur to Liverpool via London 13⅓ cents and 13 cents and 10 cents equals 36⅓ cents against 21¾ cents on wheat, being 14½ cents freight per hundred pounds against the miller.

Some wheat is taken to London for 8 cents; Montreal for export 6 cents.

The same wheat is taken to London at 8 cents; to Montreal 9 cents.

The committee ask that flour be put on the same basis as wheat plus the plus-overcharge of 2 cents per hundred pounds whether by lake and rail or all rail. In order to compete with the mills at Montreal both for the export and Quebec flour trade, if they are entitled to what is virtually grinding in transit on Manitoba wheat, why are not the mills at interior points, especially when the railroads get all the traffic from our mills, both inward and outward, and in the case of the Montreal mills and others similarly situated, they receive only part of the inward and none of the outward when it goes for export.

During the past month the export rate on grain from London to Montreal has been 13 cents, while the only rate given on flour is the local rate of 19 cents.

Millers should be placed on the same basis as exporters of grain as far as railway freights are concerned; that is, they should be given the same rates plus the terminals and they should receive the same public notice of those rates as the grain men do.

Millers should be placed at no disadvantage in regard to freight rates, as compared with grain shippers, because in many instances they bring in the larger portion of their Ontario wheat on cars, thus giving the railways two freights.

Further: because the railroads generally receive local freight on offal. Because millers shipping steadily all the year round the railroads can handle the freight with greater profit to themselves than heing forced to handle large quantities of freight at certain seasons of the year only. Because millers are large employers of labor and have large capital invested both of which are beneficial to the railroads.

This report gave rise to no small amount of comment, led off by an address from Mr. W. H. Meldrum, of Peterboro, emphasizing the complaints made in the report and adding fresh facts out of his own experience. The following resolution touching the matter was unanimously carried: Moved by W. H. Meldrum, seconded by J. C. Vanstone: That the executive committee be empowered to take up the question of discrimination of rates on wheat versus flour with the different railways and if necessary call the association together with a view of applying to the government for redress, and also take action to secure better marine insurance for members of this association.

CODE OF BY-LAWS.

The officers reports having been carefully considered the remainder of the afternoon session was given up to the disposition of the by-laws rendered necessary under the act of incorporation, and which had been carefully framed by the executive committee. With a few amendments these were passed as originally drafted.

EVENING SESSION.

Promptly at 8.15 the evening session was called to order by President Peplow.

PRESIDENT PEPLOW'S VALEDICTORY.

The retiring president, Mr. Edward Peplow, delivered his annual address after the preliminaries of opening the meeting had been concluded. He was warmly applauded at intervals during delivery and at the close a hearty vote of thanks was tendered him for the careful thought and study indicated in the preparation of the address and the amount of information and suggestion it contained. Mr. Peplow said:

This may be considered an epoch in our history as an association, and if you will allow me to give a short review of its doings down to this time it may not be amiss and may be an encouragement for the future.

It is now three years since the Dominion Millers' Association was resuscitated in 1889, the immediate cause for this being the agitation for increased duties on flour. You all remember the efforts put forth to accomplish this and the success that crowned those efforts, and notwithstanding the great opposition to this measure from the east, flour is no dearer to-day in the eastern provinces in proportion to the price of wheat than before the duty was put on; nor can it be so as long as the capacity of our mills is so much greater than the consumption of flour, and the surplus has to find an outlet in the great markets of the world. The only advantage Ontario millers gained was the supplying of our own markets with flour, thus keeping our mills better employed.

Our next effort was the buying of wheat by standard. The prejudices not only of farmers but of a large number of millers had to be overcome before this became an accomplished fact, the justice of which is shown to-day by the willingness, and even demands, of farmers to have their wheat tested, and I am glad to know that millers have in most cases stood loyally by the tester, even when it appeared to be against their interests to do so, and when they had many excuses for not using it, if they had been looking for such excuses.

It was said by many parties outside the association that when we appointed a central grain buyer our object was to corner the grain market and depress prices, and some of our members suffered considerably by local jealousies on this account. They were held up to our farmer friends as persons to be avoided when selling their grain, but time, the great arbitrator, has proved the falsity of these objections. The central buyer has enabled millers to get wheat to better advantage, because being a large medium offers of wheat are being constantly made to him and he enables the miller (especially the smaller mills) to get supplies readily, and often secures an order for flour they would otherwise lose if he had not the wheat in sight. He also effects a great saving in freights, telegraph and commission. These are the direct advantages. The indirect advantages consist in being able to advise as to markets, stocks, etc.

I think I cannot be accused of egotism in stating that the Dominion Millers' Association was the means of organising the great deputation of Boards of Trade and Chambers of Commerce that waited upon the Dominion Government urging them to a modus vivendi with the Newfoundland Government, and succeeded in getting the differential duties against Canadian produce removed.

The wheat inspection was taken up and representation made to the Dominion Government, which I feel satisfied will bear fruit and be a lasting benefit, not only to the milling fraternity, but to the whole grain trade of the Dominion. No greater damage could be done to this country than that our inspection of grain should be discredited at home or abroad, especially to the Manitoba farmer.

After two years of anxious thought, consultations and meetings of the association, we have succeeded in getting a special act of incorporation for our association, thus placing it on a permanent footing. It is now armed with such powers as I believe will enable it in the future to do even better than it has done in the past, and let me say here that the association is indebted to James Stevenson Esq., M.P. for West Peterboro, for the assistance he rendered your committee in securing the passage of the act.

There are many other things I could refer to as the result of unity of action, but time will not permit.

Having reviewed the past, the question arises, What about the future? Some of our members seem fearful for the success of the association for want of something to do, as though all the work was done and we had attained to that high and exalted position where we can stand with calm indifference and view the struggles and difficulties of those below us; but as for us, we had climbed the hill, and henceforth our course was one of uninterrupted bliss. If any here have attained to that eminence I will be glad if he will stand up.

The future is so great that one cannot hope to foretell the possibilities, but there are some things that I may be pardoned if I point out, and if I succeed in awakening interest in one or two I shall consider myself well repaid.

It is well known that the wheat crop of this Dominion leaves a large surplus for export. At the present time we have sufficient mills to grind it all if they are kept constantly at work, but they are not. You all know the cost of making a barrel of flour. If this wheat was ground in the country see the advantage it would be. Not only the amount spent in milling it, but also to mill furnishers, coopers, bag makers, etc., etc., and in addition in having the mill-feed for our dairies, thus facilitating the manufacture of butter, cheese, etc., all of which bring in good returns to our country. Our Government puts on large protective duties, our towns and cities give large bonuses to help manufacturers, but here is a raw material allowed to leave the country which, if properly handled, would be the means of building up this country more than any other manufacturing. Then why is it allowed to go out as raw material?

In looking around for causes take a glance at the Transit Committee's report. See what it says: It costs more to take 100 pounds of flour from our Ontario mills to Liverpool than to send the same quantity of wheat from Port Arthur to Liverpool. Can any miller compete against such odds? Our Government built these roads and should have sufficient control over them to prevent such discrimination. Is it right, while our Government is protecting and our towns bonusing manufacturers, that railways built at the country's expense should be allowed to discriminate against us in this manner and to the great injury of the country? Our only chance for getting this trade is systematic organization to fight the evil at every turn. We don't ask them to lose any money. We are willing to pay the railways what they now get for carrying the wheat and we think it would be to their advantage. The mills would act as a reservoir and prevent the periodical blockade caused by the great rush of wheat at one season of the year to one point and keep a steady stream the year through, and I claim the railways and steamships could carry it at less cost in this way than in the manner they are now doing it. Another great loss would be avoided if the mills were placed on a proper freight basis. All the poorer classes of wheat, such as is causing the present trouble in Montreal, could be ground in the country and the most made of it instead of allowing it to remain in the elevators at Montreal at a very great risk of total loss and the reputation of the country as a wheat supply. Again, if freight rates were put on a proper basis mill property will advance in value, capitalists will have confidence and milling would get such an impetus as would place it in a sound position.

I have not time to treat of the tracing bureau and marine insurance, both of which will give work to a good live committee; fire insurance, municipal taxation and other things affecting our business, which will give ample work for the association for some time to come. Inquiries could be made into our system of milling, or whether we have a system or not. Perhaps the Government could be induced to build an experimental mill as supplementing the experimental farm and travelling dairies, both of which I consider excellent institutions, and I verily believe that an experimental mill would prove equally beneficial to the country whether built by Government or by private enterprise.

ELECTION OF OFFICERS.

Some considerable time was taken up at this session in the election of officers and standing committees. The result was as follows:—

President—M. McLaughlin, Toronto.

First vice-president—A. H. Baird, Paris.

Second vice-president—E. S. Edmonson, Oshawa.

Treasurer—W. Galbraith, Toronto.

Secretary—Chas. B. Watts, Toronto.

Executive Committee—J. L. Spink, Toronto; James Goldie, Guelph; J. D. Saunby, London; J. D. Flavelle, Lindsay; I. Warkup, Oakville; W. S. Snider, Waterloo; and H. A. Mulhern, Peterboro.

Board of Arbitration—W. H. Meldrum, Peterboro; D. Goldie, Ayr; T. O. Kemp, Seaforth; R. Noble, Norval; N. Wenger, Ayton; James Stark, Paisley; J. C. Vanstone, Bowmanville.

MILLING QUALITIES OF WHEAT.

Mr. T. O. Kemp, manager of the Ogilvie mills at Seaforth, read the following carefully prepared paper dealing with the question: "How to arrive at the milling qualities of wheat and how to encourage the production of the best varieties and preserve their best qualities":

The importance of this subject not only to the milling industry, but to all interested in the production or handling of wheat, and in fact to the country at large, is at once very apparent. The necessity of our country for its prosperity in all lines of industry is that we produce the best possible article at the lowest possible cost. This is, and rightly so, the governing ambition of all prosperous industries. The leading necessity in connection with the milling industry is a good article to work on, one that contains the qualities in the largest degree possible necessary for the production of a first-class article. No miller is able to introduce any article in the manufacture of flour calculated to improve its quality other than is found in wheat in its natural condition. Hence the necessity of being able to detect and distinguish these important qualities. It is not our object at this time to discuss the qualities in wheat necessary to the production of a good article. Our present duty is to discuss our facilities for and ability to determine and distinguish the milling qualities of different varieties of wheat, and the best means to improve our condition in this respect. Regarding this matter, it is a well-known fact, and one that has already existed far too long, that millers as a rule depend to a large extent, in fact, almost entirely, to experience obtained from the manufacture of flour, and the result of its introduction into the trade to determine the relative commercial value of the product of any new variety of wheat. Were it in order I should be restrained through fellow sympathy from displaying our ignorance in this respect by asking a show of hands for the exceptions to this rule. Where is the miller to-day possessing either facility for, or ability to arrive at, the quality of wheat for milling purposes by other means. We have either to work out this experience for ourselves or rely upon information from others who have already obtained it in this manner. While it will ever be useful as conclusive proof of other means in finally determining this question, it fails to meet the wants of our industry to-day and offers very serious objections. The time, labor and expense in introducing and cultivating a new variety of wheat in sufficient quantity to arrive at this information in this manner at once condemns it in every respect as a means worthy of our regard except as a means of the past, while information gained through others in this manner is far too often quite unreliable. The interests and importance of the milling as well as the farming industry to-day demand better facilities, and more prompt and positive means for determining at once the milling qualities of grain. And I would suggest that a memorial from this association be presented to our Government asking that the experimental farms and agricultural colleges be furnished with the facilities and means necessary to arrive at the desired information.

This is a far more difficult question involving as it does interests outside of our own and conditions of vital importance to the farming industry. These two industries though closely connected in some respects by relative interest in the production of wheat deeply affecting both, do not go hand in hand in other respects, and the variety of grain of most interest to the miller, may under certain conditions not prove the most profitable to the farmer. I need not cite instances of this. But the fact I wish to bring out here is that while our interests and those of the farmer are so closely allied in some respects we should join hands in our efforts to promote these common interests, for so long as the farmer raises wheat for flour purposes, and the miller grinds it, the one cannot disregard the interests of the other without injury to his own. The farmer cannot produce a variety of wheat injurious to the milling interests without reflecting on his own. Nor can the miller in respect for his own interest demand of the farmer the production of such varieties as do not serve the farmers' interests. It therefore becomes the interest of the miller to be in a position conjointly with the farmer to determine not only the milling qualities of wheat, but also which wheats are most profitable to miller and farmer alike, and how to preserve the desired qualities in such wheat, and the wheat in the proper condition to serve the best interest of both.

This introduces a question which has occupied my attention considerably, viz., the stage of ripeness at which wheat should be cut. I find considerable indifference to this question on the part of millers and want of care on the part of farmers; with the farmer, resulting I think, from millers not giving the matter sufficient thought, the other from a want of knowledge on the part of the farmer and his being partially misled by the popular opinion that there is no harm in cutting the wheat green, or as it is generally expressed, "on the green side." That there must be a proper stage of ripeness to cut wheat may certainly go without saying. Such being the case, it is wonderful the diversity of opinion that exists regarding it. That the proper stage of ripeness permits of neither too early or too late cutting is also quite reasonable and presents the necessity of greater care regarding it than is displayed in the present day. That evil must result from too early cutting, both as regards the milling and productive properties of wheat, is claimed by the best authorities. If millers and farmers can agree as to the proper stage of ripeness at which wheat should be cut to best answer the purpose of both industries much I think will be done towards preserving the good milling and productive qualities in wheat, and thereby encourage its cultivation, for in looking into this matter, and from information obtained, I am satisfied our wheats deteriorate in both respects as a result of this evil practice, and I am satisfied if the memorial as suggested above meets with the favor it should at the hands of the Government, such means may be provided as will assist greatly in determining what the proper stage of ripeness for cutting wheat is as well as other conditions necessary to its successful production.

At 10.30 the meeting adjourned, the discussion on Mr. Kemp's paper to be the first order of business of the morning session.

SECOND DAY.

The convention opened promptly at 9 a.m. Wednesday with the president, Mr. M. McLaughlin, in the chair. The attendance of members was fully up to the first day.

The question of milling qualities of wheat introduced in the paper read at last night's session by Mr. T. O. Kemp, of Seaforth, was made the first subject of discussion, taking formative shape in the following resolution.

TESTING WHEATS IN SAMPLE LOTS.

Moved by T. O. Kemp, seconded by H. Barrett: That this association memorialize the Dominion and Ontario Governments at an early day drawing their attention to the advantages to farmers and millers that would result from some system of testing wheats in sample lots as to their milling and productive qualities, which tests the governments may be able to carry out in connection with the agricultural colleges and experimental farms.

This resolution provoked one of the most important discussions of the convention and especially on the one point of the best time for cutting wheat so that its milling qualities will be fully retained.

James Stark, Paisley, said that this was a question affecting not alone the millers and farmers, but the whole country. It was important that wheat be cut at the right time. But what might seem the right time for the miller would be viewed in a different light by the farmer, and the farmer was apt to look out for himself. He did not think it was necessary for the Ontario Government to be asked, as in the terms of the resolution, to touch this matter. They were doing now all that was in their power to further the interests of the miller, and he suggested that a committee be appointed to co-operate with them. Nothing more was required.

R. Noble, Norval, would like to see a plan adopted that would secure to the millers a prompt testing of wheat sown the first year without having to experiment for some time as now. Quite a difference of opinion prevails in regard to time for cutting wheat. It is held that wheat after being cut green matures from the stroke. It would help to a solution of the problem if the agricultural colleges of the country would take this question up.

J. G. Bechtel, Burford, spoke as a member of the special committee of the association that had visited the Ontario agricultural farm to examine various varieties of seed wheat. They had selected what they believed were the best varieties, though experience since had

shown that some of these varieties were not the most desirable. It had to be remembered that poor grades of wheat were scattered throughout the country, and were being sown by the farmers. How was this to be remedied? The farmer selects that grade of wheat that will give him the best yield without regard particularly to its milling qualities. The grain men sell this wheat, and if it is not bought by the miller in the locality where it is grown millers elsewhere buy it.

H. Barrett, Port Hope, said the millers must get the farmers themselves interested in this question. It must be shown to them that grain that had not matured properly was not fit for milling.

Thomas M. Syers, Thamesville, contended that the millers would experience a good deal of difficulty in telling the farmers how to manage their business. Most farmers have more wheat than they can cut in a few days. The speaker had himself been a farmer, and found that unless cutting was started early then the latter part of the crop would be bleached out too ripe. Farmers are sometimes undecided what is best to do under all the circumstances. He believed that wheat matured satisfactorily after it had been cut on the green side. If we ask farmers not to cut wheat until after it is ripe they will have to cut it in most cases in one day.

J. Knox, Stayner, considered it a mistake to buy wheat cut on the green side. We should educate farmers to let their wheat ripen before cutting.

James Hamilton, Glen Huron, said his experience was that wheat which is not fully ripe is going to deteriorate. Wheat that is green is unfit for grinding.

T. O. Kemp, Seaforth, was pleased with the turn the discussion had taken. It was just what he expected when he introduced the question. Of course there was difference of opinion. Some favored wheat cut green, others when the berry was ripe. What is meant by green cut wheat, what by cutting when ripe? We certainly want a wheat that has matured properly; but I am prepared to let nature do her part. Wheat cut green is the heaviest weighing wheat we have. Why heavier than ripe cut wheat? Green wheat drys up into a hard crystalized seed. Wheat properly matured goes into a more mealy condition and is looser in its nature. Which is the best to cut? Is not better flour obtained from wheat properly matured? Farmers are heeding what millers are saying on this question, and more wheat is being cut to-day with a regard to maintaining its milling properties than ever before.

COST OF A BARREL OF FLOUR.

J. L. Spink delivered an address, "How to save losses in milling," or, as it might fittingly be termed, "The cost of a barrel of flour." Many millers, he said, claim to be able to make a barrel of flour for twenty cents, others say twenty-five, thirty, thirty-five, and some even higher. "I am talking now," said Mr. Spink, "of the average output of a mill, and one that is run steadily, not only at intervals. I have made it a practice to keep a detailed account of all the expenses of my mill, so that I may arrive at a correct and intelligent account of the cost of my output." And here Mr. Spink took the association into his confidence and gave the members a detailed statement of the actual items of expenditure in running his Pickering mill, including insurance, fuel, oil, commissions, interest, printing, wages, office expenses, dam account, not omitting the most trifling incidental. His mill turned out about 35,000 barrels of flour a year, sometimes 40,000. He could not figure down the cost to less than thirty-six cents a barrel, exclusive of cost of barrel or packages. He did not believe that millers generally went as carefully into these details as they ought to do. In his early milling days he neglected these things, but in no other way could a miller know what his flour was costing. Another point on which millers he thought were sometimes in a maze was the quantity of wheat used in making a barrel of flour. His reference was to straight roller flour that would stand Government inspection. His experience taught him that it required four bushels and forty pounds to make a barrel of straight roller flour. "A weakness of milling was the fact that our day consisted of twenty-four hours. We are making flour far beyond our consumption. Limit the capacity to seventy-two hours a week in place of 144 and the millers will make more clear dollars in a year than they are doing under present arrangements. I would like to see our millers enter into a bond to carry out just such an arrangement. Other manufacturers run their mills ten and twelve hours and we run ours twenty-four hours a day."

The address was closed with the following resolution:

Moved by J. L. Spink, seconded by E. Peplow, that in the opinion of this meeting the cost of manufacturing a barrel of flour and the quantity of wheat required to make a barrel of flour has been generally under-estimated by millers.

A second resolution as follows was introduced, moved by W. H. Meldrum, seconded by E. McKenzie:

That in the opinion of this association it takes four bushels and forty pounds of wheat to make a barrel of straight roller flour and that the minimum cost of manufacturing a barrel of flour is not less than thirty-five cents, exclusive of cost of barrel or package.

Both resolutions were adopted by the association.

COST IN LOSSES.

E. S. Edmonson, Oshawa, said that there was an element of cost in making flour that Mr. Spink had not taken into account in his calculations, and that was the losses sustained in shipping to dishonest dealers. He had some of this kind of experience in a car of flour shipped to Quebec. It was during a time of declining markets. Flour at this particular time had dropped twenty-five cents a bag. After his shipment had reached its destination he received word that it had been made from musty wheat. The facts were it had been put into new jute bags. His customer wanted him to take $70 less than the invoice. This he refused to do; but was obliged to compromise at a loss of $50, or have the flour thrown on his hands. His was not the only case of the kind that had occurred in Quebec. He urged that this association take some means to protect its members from losses of this character. An agent might be appointed to deal with these matters, so that the basis of settlement be removed from the hands of the broker.

J. L. Spink said it would be a mistake to have it go out from this meeting that it was unsafe to ship flour to Quebec dealers. He had done business in that province for many years, having an agent located there. A large part of the output of his mill was sold in Quebec, and he had never had a case where a customer had given him trouble. He had heard of cases such as instanced by Mr. Edmonson. Probably there were dishonest dealers in the lower province, as likely elsewhere. It would seem from what was said that this were so; but it would be unjust to honest men to make the charge general.

CANADIAN FLOUR FOR THE WORLD'S FAIR.

Moved by H. Barrett, seconded by J. C. Vanstone: That it will be advisable for the Dominion Millers' Association to make an exhibit at the World's Fair in Chicago of Canadian grains and their products and that the executive committee be and are hereby requested to take the matter in charge.

The advantage to Canada of making this exhibit was eloquently advocated by P. Kelly, of Blyth, and R. Noble, of Norval. Mr. J. S. Larke, Government representative, argued with much force that it would be a great mistake to give the opportunity to anyone to say that the millers of Canada were so lacking in enterprise as to refuse to make an exhibit. It was the kind of thing that would be made use of by the enemies of the country. The motion carried.

ANOTHER BIG CROP.

Informal reports received from members in different sections of the province and also from Quebec point to another large grain yield this season. In the Peterboro section it is claimed the crop will be ahead of last year. It is ripening more fully, and will go sixty pounds to the bushel. In Ontario some wheat will weigh sixty-three pounds; the yield will be equal to last year. Brant delegates reported the outlook very hopeful in that county. In Carleton and Dundas districts an exceptionally large area is under wheat and the crop looks very fine. In Quebec the story was one of a large yield; oats would be a remarkable crop. Reports from Guelph indicated that not more than an average crop might be expected in that locality.

SMUT IN WHEAT.

Interest in the discussion on smut in wheat, which was introduced by Mr. Bechtel, was accentuated by the presence in the meeting of President Hugh Baird, of the Toronto Board of Trade, who has not spared any effort to have this evil remedied. He spoke vigorously on the question urging the millers to use every endeavor in their several localities to have farmers sow only clean wheat. The reputation of the whole country was in peril, and unless a remedy was secured our wheat would be discredited both at home and abroad. It is true that there is only a comparatively small quantity of our wheat of this character, but there is just enough that when mixed with clean samples would militate against the character of the whole.

RESOLUTIONS OF THANKS.

Moved by W. H. Meldrum, seconded by E. McKenzie, that the thanks of this association are due and are hereby tendered to the retiring president and executive council and that the treasurer be instructed to pay railway fees of the several members attending meetings of the executive during the past year.

A resolution was also passed thanking Mr. William Stevenson, M.P., of West Peterboro, for the efforts he had exerted at Ottawa to secure the successful adoption of the bill incorporating the Dominion Millers' Association.

FAREWELL WORDS OF PRESIDENT M'LAUGHLIN.

Before the meeting finally adjourned President McLaughlin took occasion to thank the members for unanimously placing him in the present position. It would be his effort, with the assistance of the executive, to further increase the usefulness of the Dominion Millers' Association during the new year upon which they had entered. He had been exceedingly well pleased with the character and tone of the meeting now brought to a close. It had been his pleasure to visit the meeting of the British millers a year ago, and whilst they took more time there to do their work than we do in Canada, he did not think they got through as much actual business. The truth is we have done a tremendous amount of work during the past day and a half. Perhaps we were too anxious to push through our work and get home. The English millers interwove more of the social element into their work. They took time to get acquainted with one another and exchange personal views, rub shoulder to shoulder. A banquet was a feature of the British meeting, and Mr. McLaughlin hinted that another year the Dominion millers need not be surprised if an innovation along these lines was introduced. But let no one suppose business will be neglected. Mr. McLaughlin assured the members that the various questions that were suggested by the proceedings of the past two days would be gone carefully into by the executive, and he invited members to correspond with himself or the secretary making any suggestion that occurred to them of service to the association.

At 12.30 noon a memorable meeting in the history of Canadian milling was brought to a close.

CONVENTION ECHOES.

That screeching elevator.

With one voice, "McLaughlin for president," and he is president.

The suggestion to establish schools of milling in Canada is worthy the consideration of the new executive.

J. L. Spink: Yes, I keep a dam account; and sometimes it is a dam account, as when two years ago it cost me $2,000 for repairs.

Ex-President Peplow's intimation that Lloyd's English insurance covers all possible losses in shipping was a good pointer for export millers.

Patrick Kelly: When you want anything from the Government go to the head every time. You'll never get anything out of the middle or tail.

Ex-Lieut.-Governor Sir Wm. P. Howland, one of the pioneers of milling in this country, was an attentive listener at part of the sessions of the association.

Secretary Watts: "I estimate the surplus wheat for export this year will be larger than the estimate of 22,000,000 last year." And Charles B. Watts is usually pretty level-headed in his predictions.

One of the intelligently active men of the convention and himself one of the oldest and most successful millers of the country was James Goldie, of Guelph, father of the late lamented president, Thomas Goldie.

THE Canadian MILLER AND GRAIN TRADE REVIEW

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

THE MILLERS' ANNUAL MEETING.

NO apology is needed for the amount of space given up in this month's CANADIAN MILLER to the Dominion Millers' Association, which held its annual meeting on the 2nd and 3rd of this month. Other interesting and valuable matter has been excluded and leading departments compressed into small space or omitted altogether, but we know of no matter left out that at this particular time is of greater import than the reports, papers and discussions that formed the programme of this gathering of Canadian millers.

We shall have from time to time occasion to deal with one and another of the subjects that were made questions of consideration at this meeting. Whether we take the able valedictory address of retiring president Peplow, full of suggestion and wholesome thought, or the vigorous, hopeful and inspiriting words of the newly-elected president, Mr. M. McLaughlin, or any one of the reports or papers presented before or after the official declarations; of all it can be said they were words fitly spoken, practical, apt and direct to the point.

The large attendance of millers from all sections of the country carries its own story of the interest and enthusiasm felt by the members of this industry in the future of the newly-incorporated millers' association.

The experimental period when millers asked the question, What good can a millers' association do the milling business of this country? has found its answer in the most forceful of all answers—accomplished deeds.

THE ST. JOHN'S CONTRIBUTIONS.

WE publish below a complete list, up to the hour of going to press, of contributions in kind received on account of the CANADIAN MILLER'S Newfoundland Relief. The total is 250 bbls. and 251 sacks, or a net contribution of 375½ barrels of flour. The names and quantities in detail are as follows:—

McLaughlin and Moore, Toronto	10	bbls.
J. L. Spink, Toronto	10	"
Citizens Milling Co., Toronto	10	"
N. Wenger and Sons, Ayton, Ont	25	"
J. D. Saunby, London, Ont	15	"
James Goldie, Guelph, Ont	25	"
J. Knox and Co., Stayner, Ont	5	"
P. R. Hoover and Sons, Green River, Ont	1	"
John Hull, Lakefield, Ont	5	"
D. Goldie, Ayr, Ont	25	"
H. A. Mulhern, Peterboro, Ont	20	"
R. C. Scott, Highgate, Ont	2	"
Citizens of Highgate	3	"
T. Hayne and Son, Brigden, Ont	5	"
H. Hollingshead, Dutton, Ont	11	"
D. B. Ross, Embro (oatmeal)	5	"
Village of Embro (oatmeal)	5	"
Village of Embro (flour)	5	"
Jno. Campbell, St. Thomas, Ont	25	"
F. L. Green, Greenwood, Ont	2	"
R. A. Thompson, Lyndon, Ont	5	bbls.
Wolverton Milling Co., Wolverton, Ont	5	"
Robert Noble, Norval, Ont	10	"
H. C. Lovering and Co., Coldwater, Ont	5	"
Isaac Warkup, Oakville, Ont	10	"
J. Lee and Son, Walkerton, Ont	1	"
	250	bbls.
Dick, Ridout and Co, Toronto, Ont	12	sacks
Charles Smith, Campbellford, Ont	10	"
J. H. Sills (citizen), Campbellford, Ont	10	"
C. L. Owen (citizen), Campbellford, Ont	6	"
R. Cockburn, (citizen), Campbellford, Ont	6	"
Other citizens of Campbellford, Ont	43	"
H. Brown and Sons, Carleton Place, Ont	40	"
Wm. McDiarmid (citizen), Carleton Place, Ont	40	"
R. B. Clement and others, Walkerton	46	"
Dobson and Campbell, Beaverton	10	"
J. R. Dafoe, Napanee, Ont.	20	"
Elliott and Hawkins, Holland Centre	8	"
	251	sacks

The following letter from the Todd Milling Co., of Galt, dated July 16, speaks for itself: "We have your circular of 11th. We are to-day shipping direct to St. John's fifty barrels of flour donated by the town of Galt, and are including in this lot our own contributions." Mr. H. A. Mulhern, of Peterboro, who contributed on his own account twenty barrels of flour, as credited above, and who is a member of the Peterboro town council, reported that the municipality had contributed 100 barrels of flour. Meldrum, Davidson & Co., of Peterboro, write that they had flour in store at St. John's when the fire broke out, and which fortunately was not destroyed. They at once telegraphed their representative in that city to apply it on account of the wants of the sufferers. These contributions are exclusive of the 375½ bbls. detailed above.

The following telegram received from Newfoundland indicates the grateful and appreciative spirit in which the contributions have been accepted on behalf of the sufferers:

St. John's, Nfld., July 26, 1892.

To A. G. Mortimer,
Pub. CANADIAN MILLER, Toronto, Can.

Committee unite in tendering most cordial thanks for marked generous offering of flour and oatmeal from some of the millers of your province towards the relief of the afflicted fire sufferers of this city, also again express deep sense of gratitude to the good people of Galt.

JAMES B. SCLATER,
Secy. Relief Com.

THE DAMP WHEAT PROBLEM.

A DIFFICULTY of serious moment has arisen in connection with Manitoba wheat in store at Montreal on which is likely to result considerable loss. Much of it, according to the Montreal Trade Bulletin, is in such a heated and bad condition that it will not realize freight charges. Rather more than a week ago a lot of No. 2 regular wheat was put up at public auction and only brought twenty-four cents. The buyer, however, so the Bulletin says, could not get delivery of the wheat until he paid thirty-five cents a bushel to the C.P.R. for freight and other charges amounting to thirty-five cents per bushel on wheat that is worth only twenty-four cents per bushel and less. It is said that the railway company will expect the owners of the grain to make good the freight charges, etc.

The conditions here narrated are suggestive of several conundrums that may give concern to grain merchants, bankers and others in the not distant future. No question there is a large quantity of depreciated wheat in the country on which advances have been made by the banks largely in excess of the price that can be realized to-day. A few weeks ago we were shown by a prominent grain man in the city samples of a wheat of which 10,000 bushels were held by one bank, and which was being offered at twenty cents a bushel. Someone is going to come short. Who?

Who is responsible for these conditions? We put this question to the grain merchant who showed us the twenty-cent sample of wheat. He answered promptly that he considered the banks had acted ill-advisedly in many of the advances that had been made the early part of the past season. They had helped to perpetuate the impression widely entertained at the time, but since knocked end-ways by later conditions, that an unusually high price was going to be realized for wheat. Nor had the banks exercised that care and judgment touching the quality of wheat on which advances were made that was to be expected from that one institution of all others that is supposed to work on conservative lines. They will most certainly have to pay the piper now.

Who shipped the wheat? The complaint is that it was shipped in a damp condition. The shipper shipped the wheat, we suppose. There is good reason to believe that with the immense crop of the Northwest of the past year and the difficulties experienced in harvesting and threshing, that the real condition of the berry was none too closely scrutinized. How far the character of the inspection adopted ought to be held accountable for the conditions now developed is another element that likely enters into the question.

Trouble will probably occur among consignor, consignee, banks and railways in a final settlement of the particular cases that are now, or may yet, come to the front. Those concerned, with the aid of the courts, may be left to arrange these matters among themselves. A repetition of similar troubles should not occur another season, if the experience of the past possesses any value.

CAN THE ETHIOPIAN, ETC.?

THE Buffalo Milling World would appear to be published for the especial purpose of abusing and villifying its neighbors; not unfrequently its own immediate relatives in its own land; more particularly Canada and Canadians, as perhaps not quite so closely related. It is not long since that a milling contemporary in its own country found it desirable, for decency's sake and the credit of the milling business in the United States, to call down this journalistic Ishmaelite. But the admonition was useless. Lepoard-like, the Milling World cannot change its spots, and so its tirades continue, seldom heeded by anyone, except when a statement is made so diametrically away from the truth that for the benefit of those who may not know the source from which it has emanated a contradiction is necessary. Here is such a statement recently made by this Buffalo journal: "The Canadian millers thought New York flour-mills were making too much money in West India flours, and not long ago they sent a lot of their high-colored, but weak, amber wheat flours into those markets, where they have got sour, and the Canadian millers have consequently soured on the West Indian trade."

No more complete answer need be given to this false charge against Canadian flour than a reference to the test made by Commissioner Adam Brown when he was in Jamaica, and published at the time in these columns. Flour, on that occasion, and not "high-colored, weak, amber wheat flour," but flour made from Manitoba No. 1 hard wheat, was purposely held for four months and then baked into bread that was the delight of the people of these Islands. Nor was the news slow in spreading, until, as Mr. Brown says, when communicated with touching this charge, "every steamer that has gone out to the several West India Islands since my return from Jamaica has carried flour." The statement of Messrs. Pickard & Black, of Halifax, owners of a shipping line doing business with these Islands, is that during the past three months they have carried over 12,000 barrels of Canadian flour to the West Indies. This hardly tells of a soured trade on the part of either consignor or consignee. Geo. Musson & Co., of this city, in a letter to the Monetary Times on the question, say: "We have been shipping flour to the West Indies since January, 1891, at the rate of hundreds of barrels per month. We have always chosen hard wheat flours for shipment, often getting a special brand made, in which was a large proportion of Manitoba wheat. We have yet to learn of one instance in which any of this flour has soured, and we have never had any complaints of its quality. On the contrary numerous certificates have come to us of the satisfaction felt by people in Barbadoes, Trinidad, St. Kitts, Antigua, etc., with the strength and character of our Canadian flour."

The truth is that the people of the West Indies have only words of praise for Canadian flour, and so long as our millers maintain the present high standards there will be no complaints of soured Canadian flour except such as come via the Buffalo milling sewer.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

THE QUEBEC FLOUR TRADE.

IN the following letter Mr. Carrier, commission merchant, of Quebec city, protests vigorously against an intimation in the July CANADIAN MILLER that the flour trade in Quebec are in the habit of dealing fraudulently with Ontario millers in their shipments of flour to that province:

Quebec, Que., July 22, 1892.

Editor CANADIAN MILLER:

Sir,—I have read carefully a paragraph in the July CANADIAN MILLER which relates to Quebec. This has been written to the disadvantage of us—the Quebec merchants—and I defy any of these millers to prove that their flour has been refused in Quebec without good reason, as not equal to sample or inspects one grade lower than what it is bought for. I will give $50 towards charity to the one who will prove the contrary. For instance, we buy one to five cars of straight roller, and the flour comes to Quebec and it inspects only extra. Well, do you suppose we will accept the flour? Well, not at all; and this kind of business happens five times out of ten; and a miller sends us one sample of flour and we will buy two or three cars of flour on his sample, and when the flour arrives in Quebec we examine the flour and we find it is not equal to the sample. Well, do you suppose we must accept it? No, sir, we can't. The prices are cut so low here and the competition is so keen that we want the quality of flour we have bought; but when the flour is equal to what we have bought even if we were losing one dollar per barrel, we take delivery of the flour and this I may prove. (Excuse my liberty, but I thought you might wish to have the two sides of the story.)

LEON M. CARRIER.

We are glad to have this letter from Mr. Carrier. The statements made in these columns last month were based on information from reliable members of the Ontario trade, who then averred, and still aver, that it is a practice in Quebec, with some dealers, to refuse shipments of flour forwarded according to sample unless the Ontario miller, rather than have the flour thrown back on his hands, is prepared to accept a less price than that agreed upon when the sale was closed. In the remarks of Mr. Edmonson, of Oshawa, at the Dominion Millers' Association, and reported in this number of the MILLER, a specific case is cited.

We have only one end to serve in any comments that may be made in this journal touching this and kindred questions, and that is the success both of the miller and his customer, and we would rather believe with Mr. Spink, who spoke on this question at the millers' convention, that the charge of Mr. Edmonson and others is the exception and not the rule.

In the interests of some one or our many charitable institutions we would like to have the neat sum of $50 fall to their treasurer, but far rather would we have the $50 continue in Mr. Carrier's possession and the good name of Quebec flour dealers remain untarnished and perfect confidence and amity between the Ontario and Quebec trade maintained.

MINNEAPOLIS MILLING IN PERIL.

Canadian flour producers have, if nothing more, an historical interest in the milling operations of Minneapolis, Minn., inasmuch that this is the largest, unless Budapest is to dispute the claim, flour-producing centre in the world. A change of these conditions from Minneapolis to Duluth, or any other city of the American union, would not likely affect flour production in Canada, yet we cannot but feel an interest in any circumstances that might lead to such a change.

According to so important an authority as Charles A. Pillsbury, the greatest of Minneapolis great millers, the whole business of milling in Minneapolis is in grave peril and is likely to be ruined by the competition of Duluth. This is the burden of a statement made by Mr. Pillsbury before the Inter-state Railway Commission. It may be that Mr. Pillsbury had a purpose to serve and put the case somewhat strongly, but, if so, he supported his position with some very substantial facts and hard logic.

The gravamen of the position is in the advantage in rates possessed by Duluth over Minneapolis. The Northwest Magazine, of St. Paul, describes the situation thus: "The controlling factor in making wheat rates from the harvest fields of the Northwest is the Northern Pacific Railroad, which has a line to Duluth from important points in Northern Minnesota and North Dakota of the same length of its line to Minneapolis. Consequently it charges the same rate to the two points. The Duluth miller pays exactly the same rate for his wheat that the Minneapolis miller pays, but when the former gets it into flour he loads the flour directly upon the lake steamers at his own dock, whereas the Minneapolis miller must ship the flour 150 miles by rail and then transfer it to the vessel. The chief competitor of the Northern Pacific is the Great Northern. Its line to Duluth is considerably longer than its line to Minneapolis, but it must make the same rate as its rival or it would get no grain to haul from competitive points in the two hard wheat states. The policy of these two roads is followed by the Soo, the Milwaukee, the Northwestern and the Minneapolis & St. Louis, which penetrate much good wheat country in western Minnesota and the two Dakotas. They will all haul to the lake as heaply as to Minneapolis." These conditions operate, it is said, to the advantage of Duluth to the extent of fifteen cents a barrel, which the Minneapolis millers testified is more than they are making.

Mr. Pillsbury in his testimony said: "In four years, yes, in three years, with a continuance of the present regime, Duluth will have a milling capacity greater than Minneapolis has to-day. The mills of Minneapolis have made the wheat market here. This market will go to the dogs, too, and every elevator in the city as well."

In this connection Mr. Pillsbury went into quite an extended review of the milling affairs of his city, and the growth and development of this industry. Twenty-three years ago, when he came to Minneapolis, the milling property in Minneapolis could be bought for thirty cents on the dollar of the original cost. The annual output of the mills was 2,000,000 barrels in 1880, 5,250,000 barrels in 1885, 7,000,000 barrels in 1890, 8,000,000 in 1891, "and," added Mr. Pillsbury, "I think we will crowd 9,000,000 barrels in 1892." Fully eighty per cent. of this flour output seeks an outlet through the Great Lakes. Forty per cent. of it is exported. Of last year's output 3,365,000 barrels went to market by way of Duluth. About $7,000,000 are invested in the milling business in Minneapolis. The terminal elevators of this city, holding 15,000,000 bushels, are worth $4,000,000, and cost $4,000,000 a year to operate them.

As everyone knows, flour milling is the backbone industry of Minneapolis and if conditions are such as Mr. Pillsbury describes then the situation is indeed serious.

A SCOTCH OATMEAL MILL.

Where better can we go than to the land o' cakes to learn all that is to be learned of the production of the Scotchman's diet—oatmeal? The following account of one of the most important oatmeal mills in Scotland, taken from the North British Agriculturalist, will, we believe, prove of value to the readers of the CANADIAN MILLER interested in the production of oatmeal:

"Craigmills are situated on the Dighty Water, some two miles from the city of Marmade and Jute. Mr. Grant is "rivetted to the soil," to use Lord Salisbury's phrase, for he is the owner of the small estate of Craigmills, which extends to some sixty acres of excellent land, most of which has a fine southern exposure. Craigmills are undoubtedly the best-equipped mills of the kind in the country, and they are fitted up with various improvements, devised by Mr. Grant himself, some of which are patented and are found in no other mill in the country. The kilns do not differ much from other kilns of the kind in appearance to the unskilled eye; but Mr. Grant, being a practical miller himself of nearly forty year's experience, and having made the manufacture of oatmeal a special study all his life, has introduced some useful improvements in dampers to regulate the heat, and also indicators beside the fires by which the operator can know at a glance if the kilns are at their proper heat without going to the dry chambers.

The floors are unusually high above the fires, thus giving the heat ample space to spread, which makes an equal dry all over, and also less risk of singeing, which is very objectionable, and entirely spoils the flavor of finest Scotch oatmeal. The roof is very steep, and unusually high above the floor, thus giving the moisture sweated out of the grain ample means of escaping into the air, as the color and flavor of the meal is apt to be seriously affected if ample means be not provided for the moisture escaping. After coming off the kilns the grain is passed over a series of dressing riddles, which removes from the good grain all the puny, undersized grains, as well as all foreign seeds, such as those of skellock, popple, etc. The refuse extract by this dressing is passed over another series of riddles, which removes all the seeds of "alien blood," to use a Clydesdale phrase, and the small grains are ground up in various ways for stock feeding purposes.

The good grain is then passed through the shelling stones, and through all the usual cleaning appliances, after which it is subjected to the action of one of the notable inventions designed by Mr. Grant. This appliance he has designated "Grant's Patent Groat and Grain Scourer," and is protected by Royal Letters Patent. The object of this machine is to remove the last trace of husk and dust which may adhere to the groats. To effect this most desirable end the groats in this machine are passed through a series of iron discs with roughly perforated holes from alternate sides, one-half of which are stationary, while the other half revolve at a high rate of speed, and that process scours off the last trace of husk and dust, which is afterwards extracted by an exhaust fan, and leaves the groats absolutely pure.

The purified groats are then passed through the millstones, which grind them into meal, after which the meal is subjected to the operation of another purifier, designed by Mr. Grant. In this machine the meal passes through a current of air which exhausts out of it all the light, fibrous substance which the meal contains, and which in unpurified meal is seen clinging to the sides of the machinery by which it is made, or the girnels in which the meal is stored. Although the amount of fibrous substance extracted in this way is not of much bulk, yet the improvement in the quality of the meal affected in this way is in inverse ratio to the amount of fibrous matter extracted. As a consequence of this double purification, first from the last trace of husk, and afterwards from the light fibrous and less digestible substance, the resulting product is the ne plus ultra of a remarkable palatable and highly nutritious food."

MARKET CONDITIONS.

Enquiry for flour both for home and foreign consumption shows some improvement. Prices for export continue lower than dealers care to accept, at the same time considerable shipments are being made. A good business is doing with the West Indies, and trade with Newfoundland, despite disorganized conditions, consequent on the fire, is coming around again to Canadian millers. The oatmeal trade is quiet, especially in export.

PRICES OF FLOUR AND MEALS.

Quotations at leading market centres at time of closing this report are as follows:—

Toronto: Car prices (Toronto freights)—Manitoba patents, $4.80 to $4.90; Manitoba strong bakers', $4.25 to $4.40; Ontario patents, $3.90 to $4.10; straight roller, $3.65 to $3.75; extra, $3.20 to $3.25; low grades, per bag, $1 to $1.50. Bran, $11.50 to $12. Shorts, $13 to $14.

Montreal: Prices as follows: Patent, spring, $4.50 to $4.65; patent, winter, $4.10 to $4.45; straight roller, $3.90 to $4.15; extra, $3.25 to $3.35; superfine $3 to $3.15; fine, $2.70 to $2.80; city strong bakers', $4.35 to $4.40; Manitoba bakers', $3.90 to $4.30; Ontario bags, extra, $1.50 to $1.60; straight rollers, $1.95 to $2; superfine, $1.35 to $1.50; fine, $1.15 to $1.20.

Office of the CANADIAN MILLER,
August 15, 1892.

THE GENERAL SURVEY.

ALL concerned are figuring these days on the probable harvest. Each month removes uncertainties in calculation that had existed a month before, making it more nearly possible to arrive at a fairly safe prediction of what the harvest actually will be. The latest estimate of the United States Department of Agriculture has placed the maximum yield at 550,000,000 bushels of wheat. Anything in weather conditions that has transpired within the few weeks since these figures were made strengthens rather than weakens this estimate. True, we have had news within the past week that hot weather in the upper Northwest was damaging to wheat and that in the south heavy rains were similarly affecting the situation. A consensus of level-headed opinion, however, favors the conclusion that the Republic is safe for another big crop and one that is not likely to come any long way behind the 612,000,000 bushels of 1891.

In Canada the secretary of the Dominion Millers' Association is authority for the statement that the surplus for export during the current crop year will be larger than the estimate of 22,000,000 a year ago. The reports that are being received from the various provinces all go to confirm this prediction. In Manitoba and the Northwest Territories there is little doubt but what the crops will be excellent and the yield large. The large crop in these provinces a year ago was not, however, an unmixed good, and The Commercial, of Winnipeg, in a leading article of a recent issue warns the farmers of that country against the "evils of a big crop." It is pointed out that the extra expense in handling the immense crop of last year, even had it been nearly all preserved, added largely, beyond the average, to the cost of production. Unfortunately the crop, despite the extra exertion, was not saved, and as one large farmer is reported to have said "had he burnt one-half his crop on the ground and given his entire attention to saving the balance, instead of trying to save it all, he would have come out better in the end, and would still have had sufficient grain to have made up a fairly good yield for his total acreage." This much is sure, in any case, Manitoba will help again this year to swell the yield of Canada to large proportions, and the more safely and perfectly this yield can be saved the more pleased, of course, everyone will be.

There is good reason to suppose that the crops in Europe are uniformly abundant and desirable in quality. Harvesting in England has commenced, and, according to the Mark Lane Express, the conditions indicate that it will be, on the whole, less costly and the crop more rapidly gathered in than usual. We must perhaps except India in a statement that Europe is likely to be favored with good crops. The final official reports have now been received from most of the Indian wheat-growing districts, and the figures are as follows:—

	1892 Quarters	1891 Quarters
N.W. Provinces and Oudh	7,410,000	8,200,000
Punjab	6,496,000	9,665,000
Central provinces	3,442,000	4,460,000
Bombay	2,236,000	3,500,000
Bengal	1,166,000	1,866,000
Other districts estimated	4,200,000	5,340,000
Total	24,950,000	33,031,000

According to the above there is the very great deficiency of 8,081,000 quarters compared with last year, and it is argued as the exports, stimulated by comparatively high prices during the early part of this year, have been almost as large since the 1st of April as they were during the same time last year, viz., 2,043,000 quarters, against 2,241,000 quarters, it is only to be expected that they will show a very considerable falling off during the rest of the season. In a very succinct, yet clearly stated, review of the market situation in the current issue of our American contemporary, Milling, this remark is made concerning the situation in India: "India's statistics are so entirely untrustworthy as to be useless beyond the results shown by actual export, that since the beginning of her crop, on April 1, have continued in nearly the same ratio with last year for the same period, or, more exactly, from April 1 to July 1 they were 17,760,000 against 19,320,000, or at a ratio for the year of over 70,000,000 bushels. Of course this ratio cannot be maintained, and the demand is certain to be so limited that last year's figures of 50,000,000 will not be needed this year. The India condition is one of potential menace to the products of this country, when the latter are so heavily in excess of our domestic requirements."

So there can be small doubt but what the world's supplies of breadstuffs from this season's crop will, with little exception, be very plenteous. Additional to this is a visible reserve that Bradstreet's places at this date at fully 70,000,000 bushels. These are statements that may seem to be possessed of a strong bearish coating, but are they not in keeping with the facts?

Another consideration, as touching the size of the crop on this side of the ocean, is our ability to export as wheat the anticipated surplus that will be possessed for export. It is estimated that there will be an excess for export of probably 250,000,000 bushels. Bradstreet's has shown in figures, given in detail in a previous review in these columns, counting in the unprecedented shipment of the past twelve months, that the average yearly exportation of wheat is equal to nearly 125,000,000 bushels. If the crop in Europe is as large as it gives promise now the question arises: Where is the outlet to be found for a surplus of the surplus? It has been suggested that in this case the millers will have their innings and our export will be as wheat in flour.

WHEAT.

Prices for wheat have ruled low throughout the month. A few days since they took a spurt consequent upon unfavorable weather conditions noted in our general review, but these conditions need not be expected to prevail for any length of time. A letter from Mr. Joseph Harris, of Winnipeg, Man., former grain inspector in Toronto, and read on 'Change a day or two ago, possesses some interest. In it, referring to the grain outlook, it said: "We are having splendid weather for the maturing of our crop. We hear of barley now being cut in Southern Manitoba, and they expect wheat to be ready next week. Two more such weeks will see us in the midst of the harvest. I don't look for the heavy yield of last season, but quality will compensate for the lighter yield per acre."

Prices current are as follows: American: Chicago: August and September, 79⅝c.; December, 82¾c. Milwaukee: 76¼c. for cash and September. Duluth: No. 1 northern, 79½c. for August. St. Louis: 75c. for cash; 75¼c. for August; 76¼ to 76¾c. for September; 80¼c. for December.

Beerbohm says, London, August 8: Floating cargoes —Wheat, firm; corn, firm. Cargoes on passage—Wheat, firm, but not active; corn, strong. Mark Lane —Wheat, quiet and steady; corn, turn dearer; flour, steady; corn, American, 23s. 6d. was 23s.; straight Minneapolis flour, 22s. 9d. was 22s. 3d.; good cargoes No. 1 California wheat off coast, 34s. 9d. was 34s. 6d. London —Good shipping No. 1 California wheat, prompt sail, 34s. 9d. was 34s. 6d.; nearly due, 34s. 9d. was 34s. 6d. French country markets — Quiet. Liverpool — Spot wheat firm, held higher; corn, very firm; red winter, 6s. 7½d.; India, 6s. 7d.; spring, 6s. 7½d.; flour, 29s. 4d.; corn, 5s. 3d., all unchanged; peas, 6s. 9½d., 1d. dearer. Canada: Toronto: Firm at 77c. straight for red and white north and west with buyers at 76c. Spring offered at 72c. north and west, and 75c. Midland. Goose sold, to arrive on track here, at 68c. and west at 66½c. Manitoba wheats less active. No. 2 Northern sold east at 83c. No. 1 hard nominal at 96 to 97c., lake and rail. No. 2 hard offered at 89c. east: No. 3 held at 75 and 76c., lake and rail. No. 1 regular enquired for at 64c. North Bay, with sellers, to arrive at 65c. Montreal: No. 2 hard Manitoba wheat, 85 to 86c.: No. 3 hard Manitoba wheat, 76 to 77c.

BARLEY.

Some interest in barley is being gathered from a letter received by a local grain firm from a large firm of English malsters, and which is being widely circulated through the country press of the province. In this objection is taken to Canadian two-rowed barley, on the ground that farmers are entirely too anxious to secure an extra bright article, and in order to obtain this they harvest it whilst too green. This makes the grain flinty, and will not produce the yield to the brewer which it would if allowed to ripen properly. This firm say: "We would much prefer a little color and have the grain mellow and full of starch than obtain a flinty white berry. Also, it is most important that the grain should be allowed to sweat well in the stook, and you must give your farmers positive instructions as to the threshing of the grain. Heretofore there have been so many broken grains in your barleys (which will not sprout while on the floor, and are perfectly ruinous to the malting of the grain) that all the other good qualities have been neutralized, and only a second or third-class article produced. Now this state of things could be easily averted by your threshers opening their machines and threshing more slowly. You can see the advantage of this when we tell you that it will enhance the value of the grain at least five to ten cents per bushel. And lastly, you must be most careful that there is no admixture of six-rowed barley, as this is very damaging indeed to the trade." An Owen Sound malster is urging Manitoba farmers to grow two-rowed barley for the English market, and at same time cautions Ontario farmers against discontinuing growing six-rowed barley, anticipating that more favorable trade relations with the United States will be secured in the near future. What the future of barley will be, and it is of that we are chiefly concerned at this time of the year, will be dependent on what sort of barley we shall raise for English export, so long as present trade conditions exist, and, on the other hand, in the event of a change of parties in the United States, on the possible opening of that market to Canada again. It might be that our barley trade should be made to compass both England and the United States.

As far as immediate trade is concerned the market is inactive and prices decidedly nominal. Locally, No. 3 extra has been offering at 41c.; and No. 2, 42c.; both on a 14c. export rate to Montreal.

OATS.

Some increased life is shown in oats. A fair export trade is doing and local demands are fair. Prices are firm at 31 and 32c.

PEAS.

The movement in peas is slow. Current quotations about 61 to 62c.

RYE.

A nominal market only.

TORONTO INDUSTRIAL EXHIBITION.

THE dates of the Toronto Industrial Exhibition, an event looked for by the people of city and country, have been fixed for September 5 to 17. The management have spent a busy year in perfecting plans for the enlargement of the fair in all important departments and by adding many new departments. In the manufacturing and agricultural features it will be especially complete, increased space being secured for this purpose. With a secretary as full of resources as Mr. Hill we need hardly say that the general and special features will be brighter and more attractive than ever.

PILING GOODS UNDER SPRINKLERS.

ONE of the most aggravating and frequent defects found in a sprinkler equipped risk is the piling of merchandise to such a height and in such a way as to render effective distribution almost an impossibility. Where the goods are piled to the ceiling and packed closely, if a fire breaks out at the bottom or in the middle of the pile where the water from the sprinkler cannot penetrate, it is likely to assume such proportions before the sprinklers are brought into effective play as to get beyond their ability to cope with the blaze. The careful disposal of stock has much to do with the successful operation of a sprinkler, and in all cases it is recommended that in piling a liberal space should be left under the ceiling, giving the sprinklers an opportunity to deflect over the goods without interruption; and also that small aisles should be left in stock so piled, say half-way between the lines of piping, in order that the side deflection from each row of sprinklers may check the flames which have started in the middle of the pile before spreading far.

More to the Millers of Canada

And Especially the Small Millers

SMALL ROLLER MILL PLANTS

We know some of you are still operating old-fashioned stone plants and that you have an idea that roller machinery is beyond your reach. To such we would say we have fitted out scores of small mills running about one barrel per hour, or say grinding four to five bushels of wheat per hour, enabling owners of such mills to regain and increase their old trade. We want you to write us for prices, etc. We can equip your mills with a complete roller outfit that will enable you to more than hold your own with other roller mills.

We use for our smallest mills a very unique, complete and light-running equipment. With such a plant we give you as good results up to their capacity as can be produced in any mill. This complete outfit does not cost more than can be made in most of small mills in at most from one to two years. It is a complete little mill, no make-shift about it, but a complete and perfect system of reductions. If you will write us we can give you the names of scores who have already profited by improving their mills in this way. If desired, on such a system as the foregoing, gristing can be done the same as in an ordinary stone mill, giving each farmer his own flour, bran and shorts.

Do not be humbugged into purchasing wonderful machines which are guaranteed to do the work of a whole line of rolls in one operation. If it could be done the millers who have the money would never use the elaborate plants they do at the present time.

Now about grain-cleaning machinery. We are building a full line of both upright and horizontal wheat close scouring, brushing and polishing machines. We have recently perfected our patterns and can guarantee machines for any purpose equal, if not better, than can be imported.

We also make and fit to old scourers and brush machines the celebrated **"Cockerell"** scouring cases. In many instances your old scourers, by the use of one of these cases, can be made to do better work than they ever did.

We also build horizontal as well as upright bran dusters in all sizes with recent improvements greatly increasing their efficiency, and as for flour mill supplies, we keep most everything in stock that can be asked for or wanted in a flour or oatmeal mill. If there is anything you want and cannot find drop us a line. You can get it from us.

WM. & J. G. GREEY 2 CHURCH STREET

TORONTO, ONTARIO

Where can you get

ROLLS GROUND AND CORRUGATED

As Accurately, as Promptly
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Send for special circular containing valuable information for sending rolls

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CANADA.

C. Wigle & Bro., flour mill, Amherstburg, Ont.; Colin Wigle is dead.

Thos. Banting is building an elevator three miles east of Methven, Man.

Whitlaw & Baird, Paris, Ont., are having their large flour mill re-shingled.

Band & McDonald, millers, St. Leon, Man., advertise dissolution of partnership.

A thirty-five thousand bushel elevator is being built by Paul Kane at Rathwel, Man.

A vote to bonus a grist mill at Wawansee, Man., was defeated by a majority of two.

The mill of Rock Bros., New Road, Norwich, Ont., has been enlarged to seventy-five barrels.

The Ogilvie Mills, with a daily output of 7,000 bbls., will consume this year over 4,000,000 bushels of wheat.

The re-modeled flouring mills of McKay & Co., at the Chaudiere, will have a capacity of 750 barrels a day.

Harris & Co., Rockwood, Ont., are putting in a 15-h.p. engine at their mill, finding the water power insufficient.

Mr. Beddaway is building a large grain elevator at Milverton, Man. It will have a capacity of nearly 40,000 bushels.

The liabilities of Thos. Nixon, miller, of Bluevale, Ont., who recently assigned, are placed at $5,000 and assets $7,000.

Kenneth Campbell, of Brandon, and T. D. Macfarland, of Oak River, Man., will build an elevator at the latter place.

The mills of the Ogilvie Milling Co., at Winnipeg, Man., and twenty elevators in the country, are to be repainted this season.

The largest amount of stock in the new elevator to be built at Kingston, Ont., will be held by the Montreal Transportation company.

The grain exported from Canada this year amounts to over 8,000,000 bushels, against 4,250,000 bushels for the same period last year.

Wm. Erastmus, a Prince Albert miller, reared as a boy near Winnipeg, Man., has fallen heir, through decease of English relations, to $750,000.

Erastus Wiman has telegraphed Secretary McGinnis, of Grand Forks, his acceptance of the invitation to attend and address the reciprocity convention.

W. J. South, formerly of Springfield-on-the-Credit, has purchased a flour mill at Brampton, Ont. His successor at Springfield is Mr. Frank Harris, late of Thorold, Ont.

Hilliard & Peplow, Peterboro, Ont., have dissolved partnership, the latter retiring. The property is now offered for sale an outcome of the death of Mr. Hilliard, Senr.

The mills of McDonald & Robb, Valleyfield, Que., have recently been remodeled, and placed in good running shape. An elevator is being built alongside the mill with storage capacity for 15,000 bushels of grain and 2,000 bags of flour.

If Ottawa gives the Ottawa and Parry Sound railway $100,000 the shops and elevators will be erected there. If Ottawa helps the company to the above amount that city will be made the distributing point for the great grain traffic which is soon to come over the road from the west.

The new flour mill of the Lake of the Woods Milling company, at Portage la Prarie, Man., is nearly completed. Its capacity will be 1,600 barrels a day. The Keewatin mill is being run to its full capacity on Canadian orders. This company will extend their elevator system in Manitoba and Northwest.

An amusing canard has gone the rounds of the western press, that steps are being taken to cut a tunnel from Lake Huron to Lake Ontario by which the former would be lowered sixty feet, and so leave a number of American cities "high and dry." The effect on the Canadian shore seems to have been overlooked.

The farmers of Northern Dakota, south of Crystal City, Man., and adjacent stations are endeavoring to make arrangements with the officials of the treasury department at Washington in regard to hauling grain to the C.P.R. Southwestern branch, and thence shipping it in bond to Duluth or Minneapolis. The farmers are hopeful that the details will soon be completed and that everything will soon be in shape for the shipment of the new crop. It will be a great saving in time and money to the farmers of the section.

Prof. Saunders reports by wire that he has examined crops in Indian Head and Regina districts and finds them fairly well advanced, good, healthy growth, but shorter straw than last year. Harvest promises to be as early as last season, and on well prepared land good returns may be expected.

The Grey Nuns, of Ottawa, have purchased 200 acres of farm land on the Montreal Road, near St. Joseph's Village, Que., and on the south side of the road opposite the house there has just been completed a small, but complete stone grist mill, where the wheat from the farm will be converted into flour. It is fitted up with the most improved machinery and will be run by steam.

Members of the Winnipeg Board of Trade are invited to be present at the conference of delegates to be held at Grand Forks on Thursday and Friday, Sept. 1st and 2nd. The subjects to be considered will be the extension of trade relations between Canada and the United States, navigation on the great lakes and a deep water channel from the head of Lake Superior to the seaboard. It is estimated that 10,000 delegates will be present.

Work has commenced on the new flour mill of Joseph Woodruff, at Killarney, Man. The capacity will be seventy-five barrels a day. Mr. Woodruff came from the village of Sydenham, county of Frontenac, Ont. His property there consists of a flour mill, sawmill, shingle and planing mill, beside 800 acres of land consisting of timber and minerals, principally mica, phosphate and iron, which is very valuable. Mr. Woodruff has been reeve of Loborough for several years and warden of the county of Frontenac.

Nothing was done in Kingston charters, says the Duluth correspondent of the Northwestern Miller, except the loading of the four Canadian boats, Tilley, Benson, Neelon and Merritt, at 3c. These vessels arrived Friday evening, about fourteen hours later than had been expected. There was some tall hustling done in giving them cargoes on Saturday, so they could clear and get through the Soo before President Harrison signed the retaliation measure charging Canadian vessels heavy tolls at the Soo canal. This item was written the end of uly. It is now well into the middle of August, and President Harrison has not yet signed that retaliation bill.

The new steel propeller Arabian, lately built for Capt. Fairgrieve, of the Hamilton Bridge Company, was launched at Hamilton recently. Mr. Hugh Fairgrieve, who designed the vessel, received many congratulations on the success of his work. The vessel is steel throughout, no iron having been used in the work of construction. The woodwork was done by Mr. Melancthon Simpson, of Toronto, and is of the finest quality. The dimensions of the Arabian are 180 feet over all, 31 feet beam, 14 feet 8 inches hold. Her capacity is 4,400 bushels of grain, and her tonnage 1,200 tons. She will have a crew of twenty men, and will be used as a freight boat exclusively. Capt. Henry Chesnutt, of St. Catharines, has been appointed master.

Flour is being sold locally by retail dealers at a very small margin, says a Winnipeg exchange. The amount of ten cents on a sack of flour is rather a small sum to cover ordinary cost of carrying on business, but even this small margin is sometimes cut in two. In fact, it is said that retail grocers sometimes sell a sack of flour even at an advance of five cents on the miller's price. This is getting the thing down fine, without doubt. Fancy paying rent, taxes, fire and light, wages and other necessary expenses on a margin of five cents on a sack of flour. And then the article is delivered at some distant back street residence perhaps, to boot. Flour and feed dealers, who buy in large quantities at close prices, are enabled in this way to compete with the retail grocers, and make a better profit, otherwise there would not be much for them in the flour trade.

At a big farmers' picnic at Grimsby a few weeks ago Principal Mills of the Ontario Agricultural College gave the somewhat startling advice that Ontario farmers should grow no more wheat. A yield of sixteen or twenty bushels an acre could not pay for the labor involved in sowing and harvesting it. Farmers must grow oats, peas, barley, corn and roots and go in for cheese making in summer and butter making in winter. Peas, oats and ensilage must be used for summer feeding in July and August. Farmers must keep better cows. It would pay many a farmer to knock half of his milch cows in the head. A cow which did not give more than 3,000 pounds of milk a year is simply boarding at the expense of her owner. No cow should be kept, which did not give from 6,000 to 7,000 pounds of milk a year. Hog, sheep and fruit raising would also be found profitable in Ontario, and farmer boys must be educated so that they could farm on scientific principles.

The trouble between Mr. J. F. McLaughlin and Mr. J. L. Spink over the report furnished the press of a sale of straight roller flour made by Mr. Spink about July 7th, has been settled by a committee of the board. It will be remembered that Mr. Spink gave the quotation as $3.75, and it was held that this was preposterously high for that brand of flour. A quarrel ensued, and as the outcome of it a motion was introduced by Mr. McLaughlin on 'Change to pass a by-law compelling dealers to furnish correct reports to the press. Mr. Spink asked for a committee of the board to investigate his books, telegrams and vouchers and report as to the truth or falsity of the statement made by him. A committee consisting of Messrs. William Christie, W. D. Matthews and John Donagh was appointed, and they reported to Mr. Wills as follows: "Dear Sir,—At the request of the president of the Toronto Board of Trade we have inquired into the matter of the sale of a round lot of straight roller flour at equal to $3.75 Toronto freight, made by J. L. Spink about the 7th of July, 1892, and a report of which was given by him to the newspapers. We find from evidence submitted by production of telegrams, sales, agents' advices, and copies of invoices, that such sales were actually made. Further, that evidence was submitted that the grade of flour supplied was the average quality of straight roller flour as regularly manufactured by Mr. J. L. Spink."

GENERAL.

Lange's granaries at Hamburg, Germany, damaged by fire to the extent of $250,000.

A car of Nebraska wheat was recently received at Kansas City which weighed sixty-six pounds per bushel.

One of the largest flour mills in France, with a capacity of 5,000 sacks per week, owned by a Mr. Schotsmans, was burned recently.

Minnesota and the Dakotas will raise, it is estimated, 150,000,000 bushels of wheat this year if the weather continues favorable.

C. A. Pillsbury, of Minneapolis, cables from London that the English wheat crop will be only about sixty-five per cent of an average one.

While the hay crop generally will be one of the largest ever gathered, Cape Breton, owing to drought, will have one much under the average.

The receipts of grain and flour at the port of Buffalo for July of this year are the largest in the history of the port for that month, viz.: 20,676,966 bushels.

Australia and New Zealand exported during the twenty-two weeks ending June 4, 491,000 quarters in wheat and flour combined, against 1,103,000 quarters for the same period of 1891.

A milling firm of Evansville, Ind., Iglehart Bros., has shared its profits of the year with its employes, the amount received by each being a five per cent. dividend upon his wages for the year.

Articles incorporating all the large flour milling companies in New York city into one corporation have been filed with the Secretary of State at Albany. The capital of the proposed corporation is $7,000,000.

Wheat exports from the Argentine Republic in 1891 were 11,530,000 bushels, against 12,240,000 bushels in 1890; of flour, 7,105 tons, against 12,018 tons in 1890; of corn, 2,180,000 bushels, against 26,400,000 in 1890.

The largest grain elevator in the world was bullt at Minneapolis Junction in 1886. The main building is 336 feet long, 92 feet wide and 175 feet high. Its storing capacity is 2,000,000 bushels of grain, says the Philadelphia Press. During its construction the carpenters and joiners used 12,500,000 feet of lumber of all kinds, besides thirty-two carloads of nails. These nails filled 10,000 common nail kegs, and best calculators say that there were but little short of 50,000,000 of them driven into the immense structure.

California wheat has a greater farm value than the wheat of any of the other states in the Union in which wheat growing is a leading industry. Last year the average price of California wheat on the farm exceeded that of Kansas wheat by more that thirty per cent. The reason why California wheat is worth so much more is because it costs so much less to get it to the foreign market. The state enjoys the advantage of deep water freight, but it should not be overlooked that a large portion of our grain crop is hauled distances of more than 300 miles from San Francisco.

Senator Washburn has objected to the insertion of wheat products in his Anti-option Bill on the ground that flour was not sold for future delivery, and was also sold only by the millers' brands. To refute his statement the leading flour dealers here, says the Toledo Market Report, and those opposed to the bill have forwarded a statement to Washington showing that seventy-five per cent. of the flour handled here is sold for future delivery, and that the brands are put on by the buyers and not by the millers. It is claimed that the buyers are not disposed to let the millers have their trade by selling the millers' brands, but have their own private brands. In the export trade about all the flour sold is for future delivery.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 12th of each month to insure insertion in the following issue.

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A FIRST-CLASS MILLER AND MANAGER, to manage joint stock company mill (100 barrels capacity); also to take two or three hundred shares (shares $25), ten per cent. of shares called up. Must be competent man.

For further particulars apply to

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A FULL ROLLER FLOUR MILL, WATER power preferred. Address

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BY A STONE MILLER OF THREE YEARS' experience, in a roller mill of from fifty to two hundred barrels, where he could learn the business, with the chance of a steady position if both parties were suited. Best of references given as to ability and habits. Will go one month on trial. Address

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THE COOKSTOWN FLOUR AND GRIST Mill for sale at a bargain. Established ten years. Reasons for selling, ill-health. First-class trade being done. Write at once to

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ONE HUNDRED BARREL ROLLER MILL for sale, or partner wanted with a few thousand dollars capital, in a splendid section of Manitoba.

Address X,
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OF VALUABLE

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IN THE TOWNSHIP OF GREY AND IN THE VILLAGE OF BRUSSELS

NOTICE IS HEREBY GIVEN THAT THERE will be offered for sale by Public Auction, at the American Hotel in the village of Brussels, on

Thursday, the 8th day of September next,

at the hour of 2 o'clock in the afternoon, those valuable properties in the township of Grey and in the village of Brussels, known as the "National Mills," owned by the late William Vanstone, and consisting of a Farm, Grist Mill and Saw Mill, Mill Dam, Water Power and the privileges used in connection with the same, together with a right to back water on the lands adjoining the Maitland river.

These mills are fitted up with the latest description of machinery for making patent process flour, having a capacity of 75 barrels per day.

In addition to the water power there is a 75 h.p. engine and a 100 h.p. steel boiler. The saw mill adjoins the grist mill, and is supplied from the same power.

There will also be offered at the same time for sale the farm property adjoining thereto, consisting of about 40 acres, and also the property situate in the village of Brussels, consisting of the residence of the late William Vanstone, stores, village lots, etc.

Further particulars made known on the day of sale, or on application to the undersigned.

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"I have, however, much pleasure in drawing your attention to the fact that the commission income alone, as you will see by referring to the Revenue Account, **exceeded the total claims for fire losses, a record, I believe, unprecedented in the history of any other fire insurance company either here or in the mother country.**

The assurers with this Company, since it was established in 1885, have already saved on the current exacted rates, upwards of **forty-five thousand dollars.**

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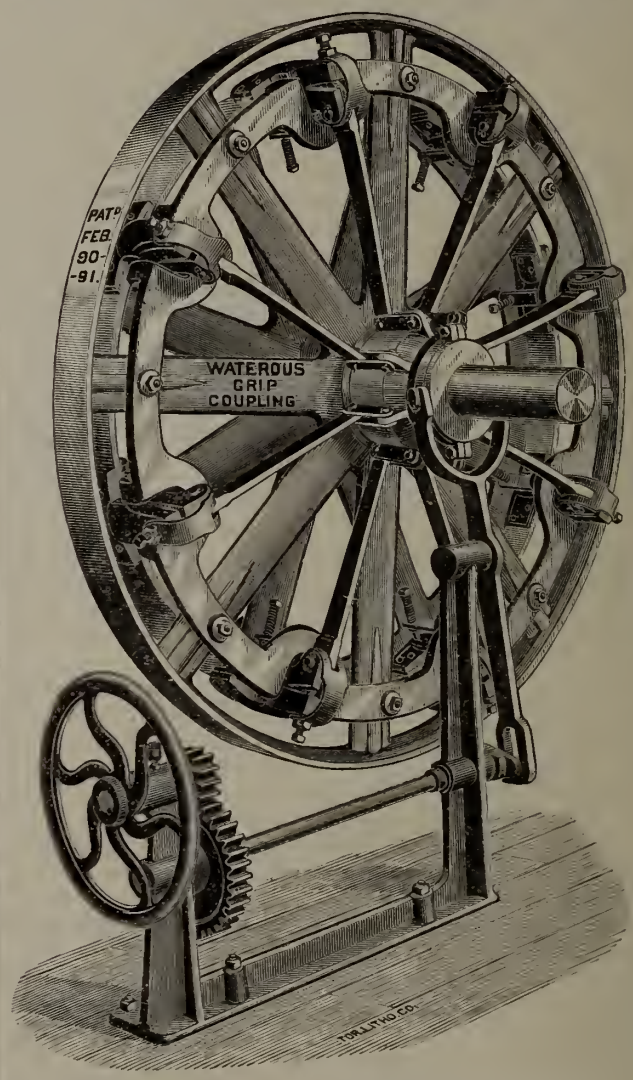

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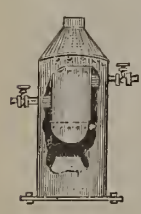

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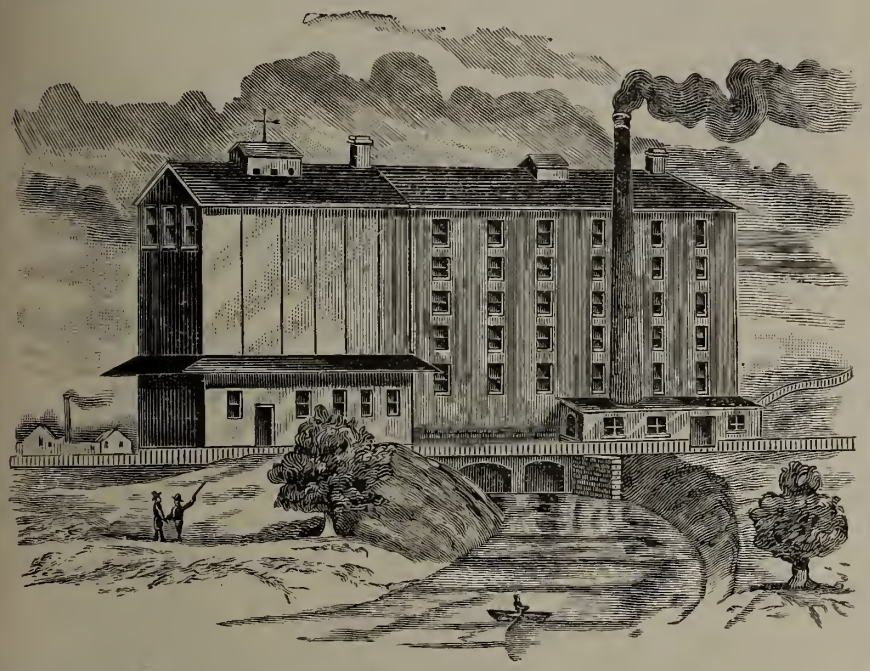

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When any mill can be shown completely equipped with any device yet known to the trade, whether imported from Europe or made in America, which can show better results than the mills above mentioned, we shall find a way to keep to the front. Until such a mill can be shown, we shall hold fast to what we know to be good, and rest our claims on what is now accomplished, rather than on what may be accomplished.

We stand ready to contract for flour mills of any capacity on the Allis system, using Gray's unequalled Flour Dressers, Centrifugal Reels and Dustless Purifiers, under a broad guarantee to produce better results than can be produced by any other system whatever, using any machine or combination of machines, new or old. Our past work stands in evidence of our ability to fill this guarantee. On winter wheat as well as spring wheat Allis mills are producing results heretofore unequalled.

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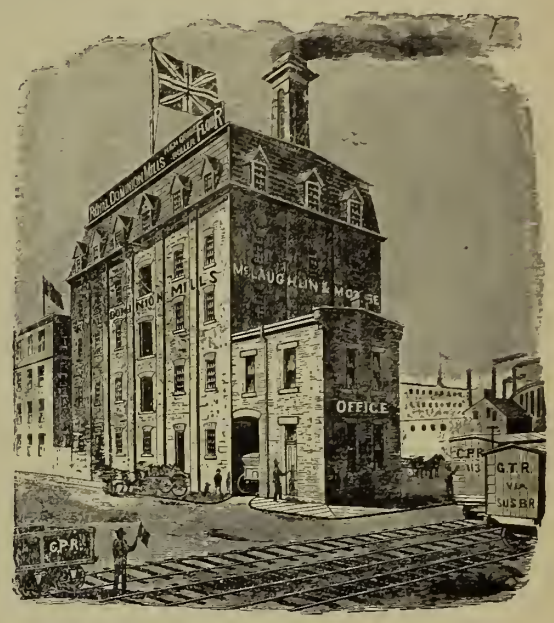

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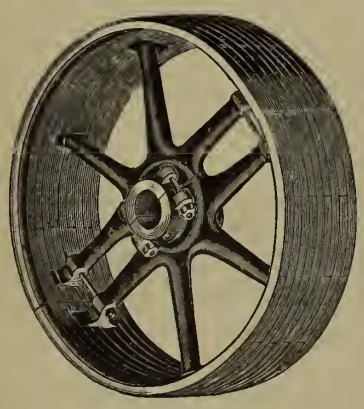

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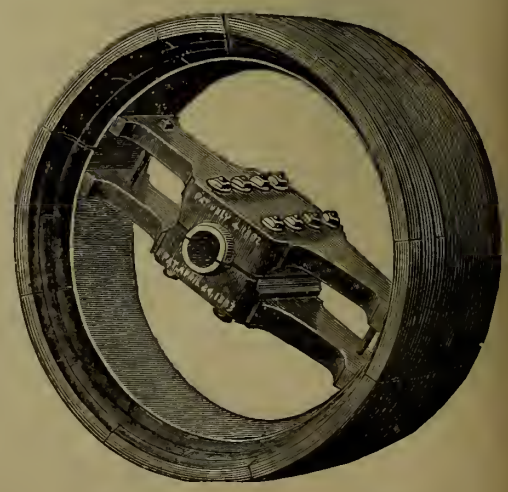

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TORONTO, ONT., SEPTEMBER, 1892

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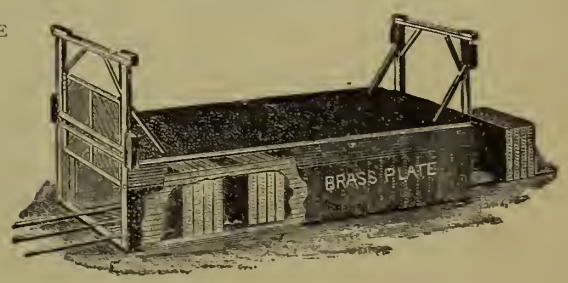

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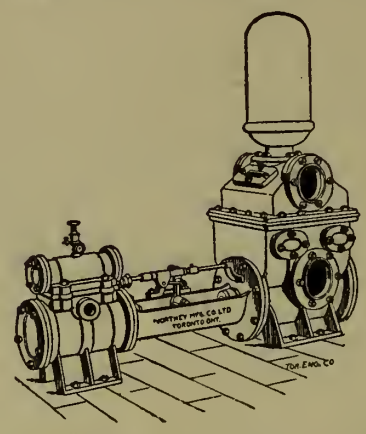

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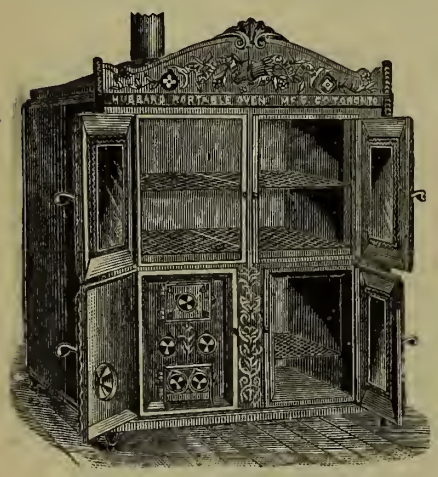

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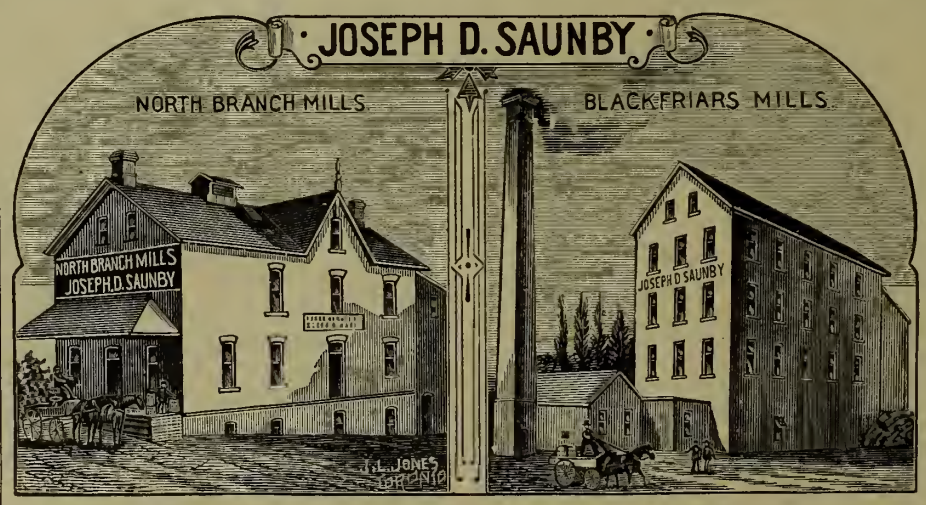

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Old Series, Vol. X. } Number 9.
New Series, Vol. II. }

TORONTO, ONT., SEPTEMBER, 1892

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CHARACTER SKETCH.

THOMAS SHAW,

PROFESSOR OF AGRICULTURE IN ONTARIO AGRICULTURAL COLLEGE.

"Tillage and pasturage are the two breasts of the State. —Sully.

IT may be that in the earlier centuries of the world's history the same exact attention was not given to the cultivation of the soil that is the case in the present day. The history of every science—and agriculture may properly take its place as one of the sciences—is one of growth. Adam Smith is usually credited with having founded the science of political economy and yet, if we go back to the days of Aristotle, Plato and the early philosophers, we find that some of the leading principles of the author of the Wealth of Nations were grasped by these writers, and if somewhat crudely shaped, the essential principles were there. And we look beyond Adam Smith's day, and students of this science will grant, we think, that in the writings of Mills, Bastiat, Macleod, Walker, Ely, Perry and others, a clearer and more complete conception of what constitutes wealth, and the principles that govern its operations, is to be obtained. Evolution plays its part with science as it does with most of the conditions of life.

The importance that is attached to the pursuit ot agriculture is forcibly expressed in the words of Sully, quoted at the head of this sketch, a French economic writer of the fifteenth century. Colbert, who won fame as Minister of Finance under Louis XIV., because of his prudent husbanding of the finances of France, shown in other ways by a marked reduction of the taxes, held it as a maxim that the nation "ought to encourage agriculture by directly lessening its burdens, by permitting the freest possible circulation of its produce within its realm." Bois-Gullebert, a provincial magistrate at Rouen wrote: "When the cultivator of the soil, the basis of society, grows poorer his poverty involves the ruin of the rest." Adam Smith placed agriculture, in his judgment, over other forms of production. Perhaps no economic writer, of the past or present day, would jeopardize his reputation by other than placing the cultivation of the soil at the basis of all profitable sources of production. Even Carey, the foremost apostle, in the present day, of protection to manufactures, concedes to agriculture a first place.

A sketch of Thomas Shaw, Professor of Agriculture in the Ontario Agricultural College, Guelph, Ont., may fittingly find space in these pages, primarily, because of the close relationship that exists, an intimacy that grows closer each year, between the man who sows and harvests the grain and the miller who grinds it into flour for individual consumption, and further because of the interest that Prof. Shaw, and the institution of which he is one of the leaders, has ever shown in the work of the Dominion Millers' Association, being ready at all times to consult with the millers, and to influence the farmer to grow a grain that would be rightly adapted to the requirements of the miller.

Thomas Shaw was born in Niagara-on-the-Lake in 1843. His parents came from Ayrshire, Scotland, many years previous. It is worth much to be well born. The parents of Mr. Shaw were of the most exemplary character, and their helpful influence upon the son is shown in the character and life of Prof. Shaw to-day.

Soon after 1843 the family removed to Woodburn, a pretty little village in South Wentworth. The future teacher and professor had no direct educational advantages other than those afforded by the common school. He worked on the farm in summer and attended school in winter. How many men, known for their scholarly attainments, and occupying prominent positions in educational walks of life, owe a large part of this education to the old village library. Mr. Shaw in his boyhood days had access to an old association library, and his winter schooling was largely supplemented by a careful and studious reading of the books secured from its shelves. These stimulated an awakening ambition, and no doubt helped to form the future character of the man. He selected his reading, on the principle, we suppose, that guides him in his agricultural pursuits to-day, that whatsoever a man sows that shall he also reap. He eschewed fiction in these early reading days, and devoured history and biography. We have the result in the well-stored mind of Prof. Shaw to-day. At the age of sixteen he had obtained a teacher's certificate, but failed to secure a school until seventeen, owing, he has facetiously remarked, to the lack of a beard. His first school brought him the munificent salary of $220 per year, out of which he paid board and washing. What surplus he laid aside for a rainy day we have never heard. For ten years he continued as a teacher of a rural school, and while doing so bought 100 acres of land, and later a second hundred, and supervised the working of it all the while. He kept adding to his first purchases until the farm consisted of 500 acres. He still retains this property, the farm being managed by a brother, John C.

PROF. THOS. SHAW.

Shaw. Some years ago he built on it a barn, and many of the important features of the Guelph Experimental station are modelled therefrom.

In 1882, without any previous experience of newspaper work, Mr. Shaw entered the turbulent sea of journalism. Along with a brother he established the Canadian Live Stock and Farm Journal, in Hamilton. He took entire charge of the editorial work, did the travelling, and at the same time supervised the farm, fifteen miles distant. No better illustration of Mr. Shaw's capacity for work need be given than this. The Stock Journal was a success from the start, both financially and otherwise, and later, when Mr. Shaw took charge of the Government Experimental farm, its management was transferred to a company.

In 1883 Mr. Shaw competed in the provincial competition for the essay prize offered annually by the Agricultural and Arts Association of Ontario, on some farm topic. He won the prize that year and the five years following and then gave up competing for it.

In 1887 he assisted Mr. V. E. Fuller in calling the meeting of farmers in Toronto which resulted in the organization of the Central Farmers' Institute, and was its first secretary, and held the office until appointed to his present position in 1888. This position calls for the management of the farm and the experiments conducted upon it, except in dairying. He has charge also of the mechanical department, and lectures on practical and theoretical agriculture both in the field and live stock departments. The growth of work on the Experimental Farm since 1888, when Prof. Shaw became connected with it, has been very marked. Then there were only 19 acres under experiment, now there are over 100. In 1888 but a few varieties of grain and grasses were grown; now nearly 1,000 varieties of grain, grasses, corn and field roots are grown. Some years ago, along with Mr. J. Mills, LL.D., president of the Ontario Agricultural College, Prof. Shaw wrote "First Principles of Agriculture," a text-book in use in the public schools of Ontario.

Personally, few men will be found who stand more popular with their associates in professional or private life. Kindness and consideration for others are unmistakable marks of the calm and clear-cut features that are to be observed from our portrait of Mr. Shaw. In many respects he is the beau ideal of a teacher, and it is not surprising that among the students of the Ontario Agricultural College he is a universal favorite. His high and broad forehead indicates, as the phrenologist would say, the intellectual and moral faculties largely developed. His whole history, from a boy attending the village school up to the present time, reaching one eminence and then another in the educational and literary world, and this amid difficulties that would have discouraged a less determined boy and man, bear all the testimony that is needed to the strength of his intellectual abilities. Though for many years in delicate health, yet through careful physical training and more or less out-door work, he has acquired great powers of endurance of work, mental and physical.

In religion he is a Presbyterian, and commenced teaching in the Sabbath school when sixteen years old. He has ever since taught in Sabbath school or Bible class, or been engaged on Sabbath in mission work.

A native to Canadian soil and an efficient watchman of perhaps Canada's most important source of wealth and power, his friends look forward to still greater achievements as a result of his industrious labors in the field of farming, for which, to use his own words, "I have always had a passion."

REGULATIONS FOR EXPORTERS.

CUSTOM laws of Great Britain require that all flour must be branded with the name of the village, township, city or province where the flour is made. Why this particularity of detail? some of our millers may be disposed to ask. We candidly say we do not know. We know it to be the law and exporters will save themselves and their customers more or less annoyance by acting accordingly. In Rome we must do as the Romans do. A removal of many of the detail regulations of the custom laws of all countries would save no little aggravation to business men of all classes. Custom regulations seem overloaded at every turn with stipulations that are a hindrance to the easy working of the wheels of trade. But such, we suppose, is the way custom laws are built. We must lay the annoyance at the door of the custom's architect or builder. After all, not a few of these regulations appear ndigenous to the country and necessary to protect some important business interest.

THEIR NEW HOME.

THE Gutta Percha & Rubber Manufacturing Co., of Toronto, have recently removed into new premises at 59 and 61 Front Street, W. The commercial concerns of the Queen City can make claim to many handsome and perfectly equipped warehouses; few there are that will excel in any particular the new home of this well-known rubber house.

BY THE WAY.

UNDER date of Sept. 3 we have been pleased to receive a letter from Mr. D. R. Ross, oatmeal miller, Embro, Ont., enclosing bill of lading for box of clothing valued at $200, on account CANADIAN MILLER Newfoundland Relief, and the information that additional to this the sum of $150 cash has already been forwarded to Newfoundland, all of which has been contributed by the ladies of Embro and neighboring district. The clothing at this season of the year will be exceedingly timely. There can be no doubt about the help of the cash contributions. It will be remembered that Mr. Ross and others had previously made a contribution of oatmeal and flour. Embro has indeed done nobly.

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An important milling change brought about by the death of the late George Hilliard, ex-M.P., has just been consummated in Peterboro, Ont. What was familiarly known as the Blythe mills property, part of the estate of the deceased, has been purchased by a local syndicate composed of Mayor Kendry, James Stevenson, M.P., and H. A. Mulhern, proprietor of the Otonabee Roller Mills. The entire property consists of flour mill, saw mill and woolen mill, the water power of the Hilliard dam and two or three houses. The new concern will enlarge the flour mill building, renew the machinery and increase the capacity to 500 barrels of flour per day. These proposed changes of themselves indicate a strong confidence in flour milling in Canada, and in the town of Peterboro as a desirable centre for large operations. The personal of the new company adds significance to this confidence. Mr. Mulhern is long since known to the milling trade as an experienced and successful miller, and who, in the heart of the proposed new operations, has already attained a pleasant measure of success. If not a practical miller, Mr. Stevenson is a practical business man of large capital and wide experience, and his active interest in the Commons last session in securing the adoption of the act incorporating the Dominion Millers' Association is proof of how near to milling his thoughts have in the past been. Mr. Kendry, Chief Magistrate of Peterboro, is one of its most enterprising citizens and will not spare in his efforts to make the Blythe Mills a profitable industry to the town. A price in the neighbourhood of $36,000 was paid for the property.

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Excitement, if, indeed, any serious excitement existed, over the enforcement of President Harrison's retaliatory regulations to levy a toll of twenty cents per ton on Canadian freight passing through the St. Mary's canal, has in less than one month become a very tame affair. As regards the grain trade the most serious hurt will come to our railroad and steamboat companies by diverting shipments to American carriers rather than our own carrying concerns. President Van Horne says the canal proclamation will affect the Canadian Pacific lake steamship service but the injury will be made up in other ways. Manager Beatty, of the same steamship line, said the retaliatory move would but direct Manitoba grain to Buffalo instead of Montreal. Some disarrangement in traffic ways may, for a short time, be expected, but no great length of time will elapse until this is overcome. Our own Soo canal is, under instructions of the Government, being pushed along with redoubled energy, so that within a twelvemonth we will be free of the canal on the American side. Whatever extra cost will be chargeable to grain and other freight shipped by Canadian vessels, will not, unlikely, be recouped by the Dominion Government. On grain the charge does not amount to more than one-half cent a bushel and the Canadian transportation and elevator companies have intimated a willingness to reduce their rates to nearly meet this cost. A reduction of harbor dues, along with these, would about level up the twenty cents for toll. Manitoba shippers will on this account be inconvenienced to little or no extent. The international question is in a measure one of different interpretations placed on certain sections of the Washington Treaty. No good results will be secured by dealing with this phase of the subject in a narrow, churlish spirit, nor for the purpose in one country or the other of making the worse appear the better cause to attain some political end. The operations of the waterways of the two countries are so interwoven one with the other, and hold so close a relationship to the commercial interests of the two countries, that only a broad and liberal interpretation of the whole question can be acceptable to the better Canadian or American citizenship.

THE NECESSITY OF A STANDARD RULE FOR BELTING.

BY C. R. TOMPKINS, M.E.

THE question of the power that may be transmitted by leather belts has been so frequently discussed in the various mechanical and trade papers that it would seem as if some definite standard of value ought to have been established long ago. But still there seems to be as wide a difference of opinion between those who claim to be experts as ever. Each one seems to have his own theory, and sticks to it, whether correct or not.

One cause for this difference of opinion is in the amount of tension that a belt should be submitted to, for we are all well aware of the fact that the greater the tension the greater will be the frictional resistance upon the face of the pulley, but economy and durability in many cases are left out of the question altogether. It should not be a question of how much power can be transmitted by a belt of certain width, but rather how much power can be safely and economically transmitted by the same.

Here the main question arises upon which "doctors" disagree. One author says a belt one inch wide will resist a strain of 675 pounds, while another well-known author says: "A leather belt will safely and continuously resist a strain of 350 pounds per square inch of section." Now, while a good piece of leather belt one inch wide might support a weight of 350 pounds without breaking, this is no criterion to go by. A belt is never made of one solid piece of leather, but is formed by joining several pieces together by cement, rivet or lacing, and as the strength of all material is no greater than its weakest place, that point must be taken for the basis of all such calculations. Again, suppose a belt joined together by either process would stand a strain of 350 pounds to the inch in width without breaking, the question arises whether it is practical or economical to any belt at that tension. Take, for example, a belt 12 inches wide and subject it to that tension, the whole stress would be $12 \times 350 = 4200$ pounds, or two and one tenth tons. Now, I submit to any practical mechanic how long would a belt of that width last under that stress, or what would be the effect upon the journals and box of a shaft three inches or less in diameter that are so frequently driven by belts of that width. The question of how much stress will a leather belt stand without breaking is not the question to be taken into consideration in practice, but rather what is the most practical stress for economy and durability. Now, it has been demonstrated by numerous tests made by the writer that an average belt one inch wide, when joined together by either of the methods referred to, parted at a stress of 210 pounds, and this being the case, and it is conceded by all mechanical experts that in practice no body should ever be subjected to a strain greater than one-half its ultimate strength, it follows that in practical use a leather belt should never be subjected to a stress greater than 100 pounds to the inch in width, which, in the case of a 12-inch belt, the standing stress would amount to 1,200 pounds, which is all that should be required of it, and if the conditions are such that a belt of that width will not transmit the required power at that tension, rather than to increase the tension and destroy the belt, it is better and more economical in the end to increase the size of the pulleys and thereby increase the speed of the belt, for the power of a belt in all cases is the speed multiplied by the stress.

The power given out by a belt under a certain stress is another question upon which there is a wide difference of opinion. But this question is so easily tested by any one who will take the trouble to do so, it would seem as if it should have been settled long ago, and a definite standard arrived at.

For the benefit of any who may desire to satisfy themselves, the following directions may be useful: Procure a pulley of any convenient size with sufficient width of face to accommodate two belts. It should be perfectly flat on the face and smooth, and mounted upon a shaft perfectly round and smooth, which may rest upon a pair of balancing bars or centres, so that it will be free to move in any direction. Next procure a good average belt one inch wide and fasten one end to the floor, and pass the other end over the pulley, and to this end suspend a weight of 100 pounds. The belt should be so attached to the floor that when the weight is suspended the belt will embrace just one-half the circumference of the pulley. Now, the power of a belt is simply the friction between the under side of the belt and the face of the pulley, governed by the stress to which the belt is submitted, for, according to the established laws of friction, the frictional resistance between any two bodies in intimate contact increases as the weight. Therefore, as we have submitted the belt in question to a stress of 100 pounds, and that being the weight pressing against the face of the pulley, it only remains to find the power necessary to overcome this frictional resistance and cause it to slip. For this purpose one end of a strap, about the same thickness as the belt, should be attached to the face of the pulley and passed over it, so as to draw in the opposite direction to the weight. Now, if sufficient weight be attached to the strap to overcome the friction of the belt and cause it to slip under this pressure of 100 pounds, that weight will represent the frictional power of the belt. With a smooth-faced iron pulley and a belt of average thickness, that weight will not vary materially from forty pounds. The writer has tested this at different times and under different conditions, and while belts that were strictly new have in most cases fallen a little short, old belts that were worn and greasy gave a trifle more, but the average belt that had been used but a short time gave near enough to forty to say that the frictional power of a leather belt is forty per cent. of the stress. Tests were also made in the same manner with belts two, three and four inches wide, with the same results, so that it is also quite safe to say that the frictional power of a belt is as the stress, regardless of width. That is to say, that with the same stress of 100 pounds, the four-inch belt slipped with the same force or weight of forty pounds; but with a stress of 400 pounds upon the four-inch belt it required a weight of 160 pounds upon the strap to cause it to slip, thus proving what has already been stated, that the frictional power of a leather belt under ordinary circumstances is equal to forty per cent. of its stress, regardless of width. That, consequently, the frictional power of a belt twelve inches wide under a standing stress of 1,200 pounds, would be no more than a six-inch belt under the same stress. But while the twelve-inch belt would only be required to stand a stress of 100 pounds to the inch in width, the six-inch belt would necessarily be subjected to a stress of 200 pounds to the inch. Therefore, it will be seen that if a stress of 1,200 pounds be required to transmit a given power, it will be more economical to use a belt twelve inches wide than one of six.

The following rule may be deduced from the foregoing tests: To find the power that may be safely transmitted by a leather belt, when the speed and stress are given, multiply the speed of the belt in feet per minute by forty per cent. of the whole stress and divide by 33,000. Assume the twelve-inch belt first referred to at a tension of 1,200 pounds to move at a velocity equal to 2,000 feet per minute. First, forty per cent. of 1,200 is $12 \times 40 = 480 \times 2{,}000 = 960{,}000 \div 33{,}000 = 29$ horse-power.

The foregoing rule is based upon the supposition that the belt embraces just one-half the circumference of the pulley, but where it embraces more or less it has been found that the frictional power increases or decreases nearly in proportion to the square root of arc of contact.

THE HUBBARD PORTABLE OVEN.

THE principles on which is established the superiority of the Hubbard oven, an advertisement of which will be found elsewhere in these pages, consists in the admission of a constant supply of pure fresh air into the oven while baking, and the continual circulation of the air in a current from the bottom to the top and thence down again. Efforts to secure these ends had been attempted before, but all had failed in practical operation until the discovery was made by the patentee of the Hubbard oven after years of study.

Subscribe for the CANADIAN MILLER—$1 a year.

VIEWS AND INTERVIEWS.

Advantages And Disadvantages.

On the introduction of improved machinery into milling it was expected that the miller would experience comparative immunity from fires. Recent returns published showing losses by fire in flour mills in England do not justify this expectation. From 1881 to 1888 the total was $5,600,000. The number of fires in the latter year were twenty-nine, and the losses, classified according to the mills, were, millstone system, $87,000; mixed system, $70,000; roller system, $500,000. It seems to be the general experience that the gains we anticipate from an advanced step in any special calling seldom materialize as brightly as we had pictured. Conversely, the difficulties of life are not often nearly as black as they appeared to one before they had actually taken place. The much-coveted happy medium is more frequently attained than we are apt to suppose.

A Curious Bit of History.

Mr. G. W. Copeleno, of Lath, in the Puget Sound district, is this year tenderly nursing a couple of stalks of wheat which have a curious history. In the fall of 1890 a wild goose killed in one of the islands near the Straits of Fuca was found to contain seeds resembling wheat. These were planted and grew profusely. Mr. Copeleno secured two sample grains where it had grown at Nelson, British Columbia. The grains are nearly twice the length of ordinary wheat, shaped something like a grain of rye, but not much thicker. The two grains germinated quickly, sent up thirty blades, and are growing well. The theory that the bird from which the original grains were taken must have found the plant in the remote north, and if no grain is now found cultivated in the known world like this, still further color will be given to the supposition that there is a polar sea with vegetable life on its shores.

Exchange On Cheques.

"A source of petty losses," says an exchange, "that aggregate to a considerable amount in a year's trade is the exchange on unaccepted checks payable at outside banks. This exchange is one-quarter of one per cent. for most banks outside the city, and the minimum charge is twenty-five cents. Hardly anyone who sends a cheque in payment of an obligation is ignorant that the cashing of it will cost the creditor from twenty-five cents upwards, and yet that way of remitting is very largely in favor, and is resorted to quite freely for small amounts, so that the commission for exchanging is material deduction from the profit on the transaction for which the money is paid. Some houses request payment to be made in currency, when the amount is small. That rule should be generally observed, and either cash or post-office order should be forwarded for small sums. The trader has been benefitted by the credit and should bear the charge of transmitting the money."

English and American View.

W. T. Stead, the doughty and able editor of the English Review of Reviews does not view altogether favorably Lord Salisbury's suggestion that England might do worse than retaliate on foreign tariffs by clapping import duties on foreign manufactures. Mr. Stead's opinion is that "There is no doubt much force in the argument that you cannot fight hostile tariffs unless you have weapons in the shape of import duties to put on or to take off, but it is child's play to propose retaliation on principles of limited liability. War is not made, whether a war of tariffs or a war of campaigns, on limited liability principles. If Lord Salisbury really meant retaliation he would not limit his retort to the McKinley tariff to a trumpery duty on a few manufactures of luxury. He would, if he meant business, propose an import duty on American corn and on American cotton." The Northwestern Miller commenting on this opinion, and looking at it from the American point of view, says: "Mr. Stead strikes the keynote of the situation. If England were to tax imports of American wheat and flour, she would at once have a club which would be adequate to batter down our McKinley-made wall. The farmer would rise and rebel against a high protective tariff, when he found the English gates shut against his wheat, and his howls and lamentations would bring any party to terms. If the effect of the McKinley bill on English manufacturers is as serious as its supporters claim it is, it will not be long before the vague consideration of such a radical retaliatory measure becomes a threatening possibility. The condition of the wheat-growing and flour-making interests of America, should England actually enforce such a measure, would be so deplorable that the mere thought of it is panicky. The question resolves itself into this: Does England dare to impose such duties? Can she get along without our wheat and flour? Those who think she cannot should remember 1888. It is well not to push our advantages too far, nor to insist too strenuously on the enforcement of a policy calculated to drive buyers of our food products into a corner where stringent retaliatory measures are absolutely necessary to self protection. The United States, in its efforts to corral the world's business, has gone as far, and perhaps farther, than is safe for the continued prosperity of all her people." The closing sentence is significant, and Uncle Sam may take it as a hint that it is possible even for the American eagle to overstretch itself.

Candid.

Not many people delight in the work of personal introspection. Even when they undertake the task the verdict is more frequently a sealed verdict than an open confession. It is, therefore, refreshing when we find anyone speaking out as openly as does the Australian Miller, of Melbourne, in these words: "Nothing tries men's honesty so sharply as a descent from wealth to poverty. The man who in times of prosperity is honest enough, who is ready and willing to pay his way when he has plenty of money, does not always act up to a very high standard when money is scarce; and thus it is that in times of depression, such as Australia has been experiencing lately, so many cases occur of men falling away from the paths of rectitude, so many humiliating exposures of commercial immorality appear in the daily papers. . . . We in Australia richly deserve the present dull times through which we are passing; they are really a blessing in disguise, and we have just got to worry through them. We have worried through the worst of them already, and the clouds are lifting close ahead."

Flour Of Shavings.

The man who would give us flour from sawdust is to be outdone by a cleverer chap, who promises us flour from shavings. The white beech trees are used, as the wood of the beech is colorless, flavorless, hard and dry. The bark is peeled off, the logs placed upon a carriage which forces them against a cutting machine shaped much like a pencil sharpener, except that it has five or six knives instead of one. These knives revolve at the rate of two hundred revolutions a minute, and the great log is soon a mass of fine shavings. After these shavings are thoroughly dried they are put into a hopper and ground the same as wheat or corn. The "flour" comes out as fine and fragrant as from the best wheat, and is put into sacks, without marking, and, bearing only an address upon an attached tag, are shipped to New York. The sawdust man believed he had in his mixture a scientific basis found in certain chemical properties, which sawdust is said to possess. The man of shavings tacitly admits, in the method of shipments adopted, that his flour is a straight fraud upon the public. But, as the great Showman has remarked, people will be humbugged, and perhaps enjoy the fun at the breakfast table as much as anywhere else.

Earliest Steam Flour Mill.

Who wrote Shakespeare? What land can claim the oldest mason? Who was first to introduce some important improvement in machinery? These are a class of questions that with almost everyone possess a peculiar interest, and that are seldom solved to the satisfaction of everyone. It has been claimed that one Charles Higgs, Gloucester, England, was the first miller to grind with steam power. But the statement is now in dispute. It is recorded that, about the year 1774, a noted engineer, James Rennie, worked out the details of a plant that was devoted to a variety of purposes, then altogether novel, such as hoisting and lowering corn and flour, loading and unloading barges, and used as a motive power for his outfit two fifty-horse power engines, which were designed and built by James Watt. These were the most complete and powerful yet produced, working under a pressure of five pounds to the superficial inch and, when acting together, exerting a power equivalent to 150 horses. They were installed in the Albion mills and drove twenty pairs of millstones, each four feet six inches in diameter, twelve of which were usually worked together, each pair grinding twelve bushels of wheat per hour by day and night if necessary, and when both engines were in action the mill was capable of drying and dressing 150 bushels an hour, by far the greatest performance achieved by any mill at that time. The mill was located on the banks of the Thames, near the end of Blackfriars' Bridge, in London, England, and ran only a few years, being destroyed by fire in 1791. As Mr. Higgs did not use steam until about 1820, the palm for using steam-power seems to belong to the owner of the Albion mill.

BUDAPEST'S MILLING CAPACITY.

LIVERPOOL, England, Milling gives a correspondent's figures on the milling industry in Hungary as follows: There are now in this country 17,277 flour-mills, among which 910 are driven by steam, 12,520 by water-power, and 3,877 by other mechanical power. The daily capacity is: By steam mills 90,694, water mills 68,653 and other mills 24,532 quintals of 100 kilos. As to the large Budapest steam mills, their development during the last twenty-two years is shown by the following figures, worked out in English figures:—

	Sacks Flour 280 lbs.	Sacks Bran 120 lbs.
1870	1,883,000	1,128,000
1871	2,007,000	1,204,000
1872	1,667,000	1,092,000
1873	1,585,000	1,022,000
1874	1,592,000	1,020,000
1875	1,864,000	1,295,000
1876	1,880,000	1,111,000
1877	2,189,000	1,525,000
1878	2,456,000	1,687,000
1879	2,578,000	1,850,000
1880	2,203,000	1,457,000
1881	2,314,000	1,723,000
1882	2,803,000	1,966,000
1883	3,208,000	2,224,000
1884	3,185,000	2,232,000
1885	3,421,000	2,447,000
1886	2,999,000	2,078,000
1887	3,108,000	1,097,000
1888	3,745,000	2,519,000
1889	3,510,000	2,487,000
1890	3,616,000	2,498,000
1891	3,814,000	2,601,000

THE UTILIZATION OF WIND POWER.

THERE is a windmill in London perched high up on a timber tower erected on the top of a building on the City Road, not far outside the old "City" boundary. It has a sail of thirty feet diameter, and is quite a big affair when one climbs to the top of the tower. But what I specially wanted to note was the fact that this windmill is lighting the premises over which it stands.

Its upright shaft, which comes down from the mill, drives a horizontal shaft which carries a large belt pulley, and by this large pulley is driven a small dynamo. The dynamo generates a current which charges a battery of accumulator cells, and these in turn "drive" the lamps. At times, when the wind is low, the speed falls below what is proper for charging the secondary battery. To prevent this being charged at such low speed there is a cut-out held in by a magnet and kept out by a coiled spring

When the magnet is weak the current is cut off from the accumulators, but when the dynamo is running at a fair speed the magnet is strong and pulls the switch into contact and the charging proceeds. The mill will run and charge all night and all day. In quiet weather it runs much of its time slowly, and, therefore, uselessly, but it also runs the night through, and I suppose would on an average do eight hours work in twenty-four.

TALK TO THE FARMERS.

ABUNDANT crops of good wheat cannot be grown for a succession of years unless care be taken to provide an equivalent for the substances carried off the land in the produce grown thereon. Urge your farmers to use fertilizers and thus uphold the quantity and quality of the wheat you mill and expect to mill.

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

WHEAT-GROWING IN ONTARIO.

A RECENT bulletin of the Ontario Agricultural College treats of experiments with winter wheat. Acting on the principle that it is always better to be forearmed against the uncertainties of the season, the recommendation is made to sow only those varieties of wheat possessed of sufficient vigor and hardihood to enable them to bear up well under adverse conditions. The relationship existing between the farmer and the miller is observed in the advice to seek a variety of wheat possessing good milling properties. To ignore this quality will prove a source of weakness to the farmer. He is also warned against a variety that is prone to rust. Although rust is, we are told, largely dependent on season, soil and location, some varieties have the power of resisting it in a marked degree.

Mr. Mills, principal of the Ontario Agricultural College, was credited, in a speech made at a farmers' picnic during the past summer, with saying that farmers should sow no more wheat; that with a yield of sixteen or twenty bushels an acre it would not pay the labor of sowing and harvesting; and the advice tendered was to grow oats, peas, barley, and to devote their attention to dairy farming. Bulletin No. 79 of Mr. Mills' college does not give this advice to the farmers. The inclination to sow a less average of winter wheat, because of the low prices ruling, is deprecated. "This tendency," says the bulletin, "can easily be carried too far. We do well to remember that we have an excellent wheat-producing country, and that we want large quantities of straw for bedding which cannot be secured so efficiently in any other way. It is at least questionable as to whether this province should at any time grow less wheat than will suffice for home consumption." It may be that Principal Mills' summer remarks were wrongly reported, but as reported, they were somewhat freely quoted in the press of our own country and the United States. The official declaration of the college would seem to be the one that would more generally serve being put into practice. The profits of farmers in Ontario have for some years been light; and other callings have suffered in a similar manner, but we do not think that a broad and perfect examination of the causes that have led to this would justify an expenditure of wheat raising.

The bulletin gives particulars of forty-four Canadian and American varieties of wheat grown under exactly the same conditions. Of fifteen varieties sown during the past three years, the Surprise heads the list in point of yield, averaging 46.37 bushels per acre for the three years. It is referred to as possessing good milling qualities, as well as other desirable qualities. The Early Red Clawson follows closely with an annual yield of 45,70 bushels; the Rodgers is third, but does not stand high as a milling wheat.

Eight varieties have been grown for two years, the American Bronze leading, Egyptian second, and Garfield third. Jones' Winter Fyfe is possessed of first-class milling properties, but is only medium as to yield and weight of grain. The Bulgarian, which bears considerable resemblance to the Democrat, is a rugged wheat and possessed of good milling qualities.

Twenty-one varieties of wheat were grown this year for the first time, and considerably more than one-half the number were imported from the United States. The best of them are Dawson's Golden Chaff, Mediterranean, Fulcaster and Red Wonder.

Summarizing the results of the various experiments the bulletin authors say: "We are justified in concluding that the wheat-producing capabilities of Ontario are still of a high order." The average yields per acre of the white and red wheats have not been far different, being about one bushel per acre in favor of the white wheats; the red wheats have averaged from one to two pounds per bushel more than the white wheats.

RAILROAD DISCRIMINATIONS.

COMMENTING on the discussion at the annual meeting of the Dominion Millers' Association on the discrimination in railroad rates against flour in favor of grain, the Canadian Manufacturer says: "This is a repetition of a similar condition which prevailed a few years ago, when the duty upon American flour was actually less than the duty upon the quantity of wheat necessary to make the flour. In that instance the influence of the Canadian Manufacturers' Association was brought to bear upon the Government with the result that the duty upon flour was advanced from fifty cents per barrel to seventy-five cents. In the present instance we do not observe any great outcry on the part of so-called protection newspapers against the railroads. Perhaps it is because of a dislike to jeopardize the editorial passes. If the railroads do not correct this evil, and that very promptly, the sentiment will gain ground very rapidly that the Government should intervene. The milling interest should not be handicapped by such unjust discrimination."

We are pleased to find our contemporary speaking out plainly on this question. The railroads are not only tardy to move in the matter, but their treatment of the committee appointed to meet with a prominent official of one railway a few months ago does not inspire confidence in their desire to apply a solvent to the trouble. It is folly, however, to suppose that the question can be shirked. More than once the suggestion has been made in these columns that the Government appoint a Railway commission, to which this and many other questions of dispute between business men and the railroads could be referred for settlement. We note that the Canadian Manufacturer favors Government interference. The Millers' Association has so far hesitated to move on these lines, though we have reason to know that not a few of its leading members are of opinion that the wrongs of which they justly complain will not be righted until a determined position of the kind is taken.

The influence of the Manufacturers' Association was with the millers in the duty fight of a few years ago, though it is assuming rather much to intimate that it was largely through this influence that the duty upon flour was increased. The heavy work was done, naturally and properly, of course, by the Dominion Millers' Association, led by Mr. M. McLaughlin, the chairman of the committee having the matter in hand. The opportunity is here again to do good work on behalf of an important Canadian industry, for we judge that the Canadian Manufacturer is not, as would seem to be the case with some of its protection contemporaries, afraid "to jeopardize the editorial passes."

BUSINESS COMBINATIONS.

CONSOLIDATION has taken hold of many of the commercial establishments of the present day, especially in manufacturing lines, where the advantages of concentration of effort and capital are more clearly seen. Recently in this country we have witnessed the formation of powerful combines among the implement men, paint manufacturers, cotton concerns and other interests. The flour millers have not made any movement in this direction, as yet, but across the border they are moving actively. More than three-fourths of the immense flour-making capacity of Minneapolis is controlled by three companies. The big mills of New York and Brooklyn, with an aggregate daily capacity of 9,000 barrels, passed recently into the hands of one corporation. More recently a combination, including, practically, all the prominent mills in California, was formed. By many it is thought that the mills of St. Louis will soon take a similar course. A smaller consolidation has just occurred in North Dakota, where a strong business association already disposes of the output of that State with signal economy. Buffalo, Rochester, Milwaukee, Duluth and West Superior have not yet been "heard from" in such a way, and may not be for years to come. Special conditions are necessary to the success of a consolidation of mills. It is not enough that they be in one city or district; they must also be grinding for the same general markets.

Taking a look over the commercial horizon generally it seems plain that this movement is more likely to gather strength than to recede. We see it in the absorption to a large extent of the small store-keeper by the larger dealer. The small miller, so far as Canada is concerned, has had immunity from these conditions in a greater degree probably than any other class of business men.

The coal combine in Canada and the United States where the cost of the indispensable black diamonds has advanced, and seems likely to further advance, causes everyone to taste of the hardship that a combination can inflict on a people. It is maintained, however, with a good deal of force, that in not a few cases a consolidation of commercial interests operates for the good of even those who have been squeezed at the time by the consolidation. The man who has been engaged in store-keeping in a small way, struggling against keen competition, and tasting the bitterness of doing business on a small capital, working hard and making little, improves his position often by withdrawing from business and accepting a clerkship under another. The same rule holds good in other lines of commerce.

The greed of the age, manifested not infrequently in the career of the rich monopolist, is to be decried and manfully opposed wherever and whenever its hydrahead is seen. But it would be a mistake to run away with the idea that justice and mercy have no part in the composition of all our greater business houses, and that an iron heel is ready in every case to be pressed upon the neck of those who are in subjection to them. Some recent reports of large business and manufacturing institutions, conducted on the profit-sharing plan, where the employee shares with the employer in the prosperity of the business, are happy illustrations of a brighter state of affairs. And if monopolistic combines are increasing in number so are the profit-sharing establishments.

AGAINST GAMBLING.

WHAT has been known as the Washburn Anti-Option Bill, which was specially aimed at the bucket shop business of the United States has been shelved for at least another term. Congress has adjourned and this measure is not among those that bear the official assent. From the first inception of the measure a vigorous and desperately determined assault was kept up against it. Every influence that could be tapped was utilized to help to down the bill. The Boards of Trade, in which are many reputable grain men, but which also contain a strong gambling element, did not escape the contamination that comes from standing in with a doubtful element.

It was alleged against the bill that some of its provisions would have operated to the prejudice of legitimate business. This may have been the case in, we opine, a very limited degree. And, if so, it would not have been a difficult matter to have eliminated the objectionable clauses. But it was the shallowest simulation for the opponents to make these objections the ground of their attack. The bill was not wanted because it was a square blow at gambling.

Measures of this character, however, can never be suppressed in this fashion. In fact, they don't down. The fight in Canada against this class of business was less difficult than will likely be the case in the neighboring country. But victory will ultimately come, and those concerned may better now, than later, perhaps, accept the defeated measure as a notice to quit.

"WE are not making the active preparations in connection with the barley crop as in former years," said Mr. W. D. Matthews. "The duty imposed by the United States last year has brought about some uncertainty in the trade; in addition, I am afraid that this year's crop is too light in weight and too dark in color for use by the English brewers. Its value, therefore, will depend entirely, if it is to go for export, upon what it will realize for feeding purposes. I think our barley will average two pounds to the bushel less than that of last year, and a large proportion of it is stained."

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"The fixing of standards of Manitoba grains promises to be still a matter for controversy," said a local grain man. "Previous to last year the standards were fixed in the east. Then the Manitoba people raised an objection, and the Government allowed standards to be fixed in Winnipeg as well as in the east. This did not give satisfaction, as everybody in the trade knows, for stuff graded at Winnipeg often failed to come to the Toronto inspector's standard. As a result of the representations made to the Government, as you already know, it has been decreed that experts for fixing the standards shall be appointed by order-in-council. Now the farmers of Manitoba are demanding representation on the board of standard fixers, and I hope they'll succeed."

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Mr. A. Moore, of the Royal Dominion Mills (McLaughlin & Moore), who is travelling in the Northwest, writes his partner, President McLaughlin, of the Dominion Millers' Association, as follows: "I drove over some fine fields of wheat to-day, among them 2,300 acres of Sanderson's, which is one-half or more in the stook, not a heavy crop, but a very nice one. All was ripe and standing, clear of weeds or smut, excepting 100 acres, which is very smutty. All his seed was frozen seed that he bought at a low price. All was soaked in bluestone except that used in the 100 acres of smutty wheat. Most of the wheat will go No. 1 hard. There was a little frost last night and the night before, but none to hurt the grain." This is strong testimony for bluestone as a preventative of smut. It would not appear, at the time of Mr. Moore's writing, that any damage worth naming has been done by frost.

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The Montreal correspondent of the Empire reports an interview of Mr. Robert Meighen, president of the Lake of the Woods Milling Co., with the Hon. Mr. Chapleau, Minister of Customs, with reference to the grinding of wheat in bond. It appears that the mode of procedure heretofore adopted has not been satisfactory to his company and he states that his directors are now quite decided in their views against the grinding of wheat in bond. They maintain that the intention was to provide for the entry of wheat for grinding in bond when the crop of the Dominion was not sufficient to supply the wants of the country, but Manitoba having become a very large producer of wheat, and Canada a large exporter of both wheat and flour, they, as supporters of the National Policy, are strongly against the importation of wheat for grinding in bond, and maintain that it operates against the Manitoba farmer, and, in fact, the wheat producers of the entire Dominion.

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"With regard to importations of flour," says a leading West Indian shipper, writing to a Montreal dealer, "it is almost the invariable custom here to obtain supplies through New York, and these are purchased and shipped by agents there. There has been some small trade with Canada in flour and other goods during the last few months, but the dates of arrival of the Canadian steamers lately have been so uncertain and the goods that were expected on board have been found shut out, that merchants still depend for their regular supplies on New York. Can you not do anything to get us a better service? You should have a weekly one at least. The vessels need not necessarily be so large as those already on the route. Let them be say 500 tons. Those already on the route are between 1,000 and 1,200. People will not order goods from Canada while this slow communication exists. If I were to order flour from some point in Canada to-day I might not get it for two months, whereas ordering from New York I could count on getting it inside of twenty days."

* * * *

C. A. Pillsbury, the big Minneapolis miller, has recently returned from a trip to England. Naturally he studied flour interests, and says the English flour importers were nearly all heavy losers by depreciation in the value of breadstuffs the past year, and that the heavier millers, even, did not escape loss. He cited one instance where an English flour man was dangerously ill about six months, and to that fact he owed his present solvency. Part of the time, just at the period when prices were at or near the top, he was not expected to live, and therefore could not be consulted as to business. Those in charge of his affairs simply bought from hand to mouth, and, when breadstuffs began to tumble, they had nothing upon which to lose. Mr. Pillsbury says that, while everything appeared of a roseate hue for the miller when he entered on the crop year now about closed, the losses later, sustained by shrinkage on stocks of wheat and flour necessarily held, have about wiped out whatever profits were made on the first half of the season.

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Mr. Leon M. Carrier, commission merchant, Quebec, says, in reply to the remarks of Mr. E. S. Edmonson, at the annual meeting of the Dominion Millers' Association: "I must give credit to Mr. J. L. Spink for his reply to Mr. Edmonson. Mr. Spink understands the Quebec market thoroughly, having been doing business here for many years. In reply to Mr. Edmonson's charges I affirm here that the car of flour which he refers to was inspected by the Quebec inspector as musty wheat. If he thought the inspector was mistaken all he had to do was to make a survey on him, for he would be dealing with a perfectly reliable man. Let me say I have great confidence in our inspector's report as being correct. If Mr. Edmonson can prove what he said there is still $50 which is at the disposal of some charitable institution. I feel contented when I see that there are only one or two out of 600 or 700 millers who have any complaint to make against Quebec dealers, and that these one or two millers who have made petty accusations cannot even prove them. I could make a similar accusation against one miller in Ontario who has taken advantage of some Quebec dealers, in having them protect his draft, and that they would make the difference good, but the same difference was never acknowledged."

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Sir William P. Howland has for some years made it a custom to visit Manitoba in the interests of his grain and milling business. This year he reached Winnipeg about the end of August, a week later than in former years. "I was pleased," said he, "to see for the first time the vegetables and garden produce unhurt by frost. They have hitherto been ill omens to me." From present indications he believed the crop would be a good one. He was glad that exaggerated reports of the harvest had become a thing of the past. They had done much harm to the country. Sir William had no little fault to find with the grading during the past season of the wheat for export. The grading at Winnipeg, he says, was all right, but at Fort William and Port Arthur caused much dissatisfaction, and this did no little harm to Manitoba wheat. The standards were lower than any previous year, and this, Sir William thinks, was a great mistake; the standards should be graded not in accordance with the year's crop, but with the usual and best samples. "Manitoba wheat," said Sir William, "was in very great demand in the east this year and probably ten times more was used than in any previous year. The wheat in the east from the land being over-cropped requires a strengthening mixture, and this you supply. Asked on the probable price of wheat when the market opens, Sir William replied that at present it was very hard to form any opinion. Prices are ruling very low all over the world, and if it was not that transportation was remarkably cheap just now, the price would probably be lower than ever. Pressed as to the probable figure he said he thought No. 1 would be in the neighborhood of sixty cents.

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Mr. D. Stewart, son of Mr. F. C. Stewart, ex-M.P.P. for Dufferin, Ont., who is up on business in Manitoba, writes from Pilot Mound, Man., as follows: "The crops look fine. I think in a three-mile track around here there is more grain than is grown in the best township we have. I saw a ninety-acre field of oats that seeded itself from the seed that was dropped on the ground last year. The owner says he will have seventy-five bushels to the acre off it; I believe he will. You can buy the very best oats here for fourteen cents a bushel and wheat you can't give away. I was out for a drive and was shown a pile of wheat in a field, spread out on boards without any covering, which contained between three and four thousand bushels. The elevators all through the country are filled to the roof with wheat and they don't know what they are going to do with it. I walked out to some stacks about half a mile from town. They were all wheat stacks which they could not get threshed last fall. I counted from where I stood twenty-two stacks, and no matter where you drive there are dozens of stacks in sight."

* * * *

Mr. Jerome K. Jerome, author of that variously criticised book, "Three Men in a Boat," and whose new magazine, The Idler, is one of the phenomenal successes of English journalism, has lately been interviewed by Mr. Raymond Blathwayt, who is sometimes referred to as the Napoleon of newspaper interviewers. Among other bright things Mr. Jerome said to Mr. Blathwayt was this: "A fool's opinion is often more interesting than a wise man's comments on someone else's views. I always like to get a 'bus driver's opinions, for instance. Not that I mean for a moment to imply that they are fools, the very reverse, but because it is our opinion, pure and undiluted, not somebody else's watered down." The individual, personal opinions of another, given without restraint or studied effort, possess a charm that cannot be made part of the ablest essay from the ablest essayists, no matter how important the subject matter may be. Do you know, friends, that this is the special mission of this page? A free parliament, as I have sometimes said, where everyone can speak out with the most perfect freedom and candor. One view may be wholly opposite to that of another. But, never mind, each is, to quote again Mr. Jerome, "our opinion (yours), pure and undiluted, not somebody else's." The opinion may be contrary to the opinions of the editor. Never mind, it is your opinion, not somebody else's, and the editor wants it.

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Much uneasiness is felt in grain circles concerning the steps that may be taken by the Trunk Line Association in New York regarding the grading of Canadian grain shipped to that port for export. Mr. Miall, Commissioner of Inland Revenue, interviewed touching the resolution adopted by the Montreal Board of Trade that the Dominion Government be memorialized to request the United States Government to permit of the appointment of Canadian inspectors at New York to grade Canadian grain, said that he had only just seen the report in the papers and the memorial itself had not yet been received. He could not, therefore, express any opinion as to what course would be pursued. He said, however, that he thought it would have been better if the Board of Trade had appointed a small committee to visit New York and ascertain whether the proposed appointment of Canadian inspectors was possible and practicable. Even if the United States Government had no objection, there may be difficulties with the state inspectors to overcome, and possibly the elevator companies may not be willing to admit Canadian inspectors to their buildings. These and other points would have to be considered by the Government before any action could be taken in the direction asked by the Board of Trade, and if the Board has not possessed itself fully of all information on these points it will be necessary that they be enquired into before action can be taken.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

PROFITS IN OFFAL.

WHEN in Boston, recently, President McLaughlin, of the Dominion Millers' Association, states he learned that bran was being largely and increasingly used by farmers for feeding cattle. It had been found that for all purposes this class of feed placed the cattle in better condition than much other food that is usually given them. The result was that bran was looking up in the States and would continue to look up as its value in this respect became more widely known.

Millers in Canada would find it to their interest to spread this information among the farming community in their several localities. Bran was not a source of profit to the miller to-day. He views it with somewhat cold indifference. But the opinion of experienced millers is that when anything approaching a generous price can be secured for the offal, then it is that there is a profit in flour milling.

WEST INDIAN TRADE.

Our trade in mill products with the West Indies would be materially increased if more complete shipping facilities were furnished either as a result of government or individual enterprise. The Pickard & Black steamship company has in part met the needs of shippers. The quantity of flour that this company has carried within the past few months, and referred to in the August MILLER, is evidence on this point. But what is wanted is greater dispatch. As is pointed out by a West Indian shipper in the Scribe page of this issue of the MILLER, the means of communication between Canada and these Islands is too slow, making it necessary for dealers to order supplies from New York which they would rather receive from this country. A steamship service at least once a week is suggested as necessary to overcome the difficulty, and smaller vessels, say 500 tons, are recommended.

The present trade with the Indies, together with undoubted possibilities, ought to influence the Dominion Government to handle this question with greater definiteness and energy than has yet been the case.

GROWTH OF FOREIGN MILLING.

It has been apparent to any one, who has studied the history of flour milling in Great Britain that, especially of recent years, this industry has been making marked progress. The mills in few important respects are behind the best equipped mills in this country, whilst it is the opinion of close observers from this side of the Atlantic that in not a few matters they are ahead of us here. Mr. Louis H. Gibson, a writer possessed of a very perfect knowledge of the milling situation in both America and Great Britain, points out in a recent article in the American monthly, Milling, that in the matter of mill construction millers across the sea have the lead. Specific reference is made to the Ure mill at Glasgow, Scotland, which Mr. Gibson says "is the best constructed mill building I ever saw." The French mills are said to be all splendid buildings, well and neatly kept. "Such things as shafting being out of line and requiring extra power to drive is not to be thought of." The American miller can make cheaper flour and get more money out of the wheat than foreign competitors. This must, so long as it is the case, prove an invaluable source of strength to him in competing for foreign trade. It is possible, however, that the time may come when, as in some other respects, clever as we believe ourselves to be in this newer country, we may be distanced by the older land. Our contemporary, Milling, of Liverpool, England, declares very emphatically in a recent number that flour milling in Great Britain has more than recovered its old position and is still making rapid strides. "The trade once almost monopolized by American flour has gradually and surely passed to a large extent into the hands of our home millers, and the process still goes on. Even in Scotland, where imported flour finds perhaps its best British market, the development of home milling is still making progress." The general advantages in milling in this country over the foreign miller are many and, we would think, nearly insurmountable. We need not, however, be beyond taking the suggestion that is contained in this one condition alone—the steady growth of flour milling in Great Britain, France and Prussia. And if in mill construction, grain cleaning and other respects, as Mr. Gibson intimates, we are behind the foreign miller, why not apply the remedy and round up our milling methods in the spots they are weak?

BILLS OF LADING.

There is nothing new in an agitation for better methods of transportation in flour between this country and Great Britain. There is some encouragement, however, in a certain measure of interest and activity that is being indicated in circles where one does not always look for these things. The trouble is one that concerns the millers on this side of the Atlantic and his customer across the sea, and in both countries efforts are being made to secure reform.

Mr. W. J. Stockman, a well-known commission merchant, of Leith, Scotland, who does a large trade with the millers of America, has received a letter from the steamship agents of the Arrow Line in these words: "A feeling exists among consigners of flour from New York to Leith that, notwithstanding the shipowners' exemption from liability for short weight by bills of lading, they should undertake some degree of responsibility. The owners of the regular steamers, therefore, have agreed, as a trial, to allow claims exceeding twenty-five shillings on any one bill of lading consignment on all their arrivals after August 1. This is entirely without prejudice and may be withdrawn at any time. Claims will only be allowed on the signature of our dock checkers, and all shortages consequently must be passed by them." This is hopeful, as in some measure the action of the Arrow Line is voluntary.

Perhaps the greatest source of worry to consignor and consignee interested in the foreign trade is the delays in shipment and the difficulties of securing redress from the loss incurred in this way. The London (Eng.) flour trade association undertook, some time ago, to draft a bill of lading that would, they had hoped, prove a remedy. Having completed the bill a committee from the association met the leading shipowners and presented them with a draft of it. The matter for the time being ended there. Becoming anxious, the flour men pressed the companies for an answer, and were told that their bill had been sent to New York for consideration by the carrying trade there. "As a matter of course," says the London Miller, "this reply was little calculated to satisfy the association, who thereupon advised their American correspondents of the steps they had taken in London. The chief bone of contention between the flour trade of London and the ship-owners seems to be a claim advanced by the former for compensation in cases of delayed transit. The proposed bill contains the following clause: 'It is further agreed that the goods shall be forwarded with all reasonable despatch, and shall be put on board the ocean steamer within six weeks from the date of this bill of lading, failing which the above-mentioned freight shall be reduced five cents per 100 pounds for each and every month or portion of a month after the expiry of the said weeks from the date of this bill of lading.' That such a clause would under any circumstances be accepted by the carriers of the United States, or for the matter of that, of Canadian flour, seems out of the question." Here in the meantime this matter is standing. What will be the outcome of any further negotiations it may be difficult to say, but the question having been opened between the trade and the shipowners it is reasonable to expect that ultimately it will produce some satisfactory results.

A United States milling journal, discussing the subject of bills of lading, has made the remark that the trouble is not at all times with the steamship companies. Steamship agents complain bitterly, says our contemporary, and with reason, of the manner in which many western millers ignore their rights in the matter of prompt shipments. "A line has, for instance, a certain number of vessels sailing in June. It books cargoes, expecting the same to be on hand during the month. The miller neglects to ship and spot freight must be secured to take the place of this shipment. This is frequently done at a loss by the steamship agent. In July the delayed flour arrives, the miller not having shipped it promptly, but, inasmuch as other freight has necessarily been booked for July sailings, the flour must perforce lie over until August. Here ensues a delay for which the miller is alone responsible, as, had he shipped promptly, as agreed, his flour would have gone forward sixty days earlier. Such occurrences as these are not infrequent. Steamships carrying western flour are frequently so uncertain as to what cargo will be on hand in time that, although they may not desire to overbook, they are forced to do so or run the risk of having their steamers sail a thousand tons or more short of cargo."

The charge here is against United States millers. Canadian millers, who are as anxious as they to secure improved transportation methods, are not, we trust, also blameworthy.

MARKET CONDITIONS.

Millers are hoping to buy wheat at a price this season that will leave a decent margin of profit for milling. As prices have been running the past season has been far from a money-making one. Trade during the month has maintained the average slowness of the preceding months of the year. Hopes are built on an improved trade with Newfoundland this fall, and these will, in a reasonable measure, no doubt, be realized. Consignments to Great Britain are not many. The London correspondent of the Northwestern Miller states in a late letter: "American flour is evidently not of the high quality which it was some years ago, and this fact will account for bakers turning to the home-made product." And he urges American millers, above all things else, to maintain a high standard of quality if they want to retain a profitable trade in England. In another column we have something to say of flour milling in Great Britain, and alongside of this the remark we have here quoted has considerable significance. Best American spring patent, ex store, is quoted by this London writer at 26s. 6d. and 27s. 6d. per 280 lbs., while London-made patents fetch 29s. and sell more freely than American. New American wheat is reported by millers to make a fine quality of flour, with greater strength than the old crop had, though requiring more pounds to make a barrel.

PRICES OF FLOUR AND MEALS.

Prices at the leading market centres at the time of closing this report are as follows:

Toronto: Car prices are: Flour (Toronto freights), Manitoba patents, $4.60 to $4.65; Manitoba strong bakers', $4.20 to $4.30; Ontario patents, $3.90 to $4.10; straight roller, $3.50 to $3.65; extra, $3.15 to $3.25; low grades, per bag, $1 to $1.50. Bran, $11.50 to $12.50. Shorts, $13 to $14.

Montreal: W. W. Ogilvie exported 20,000 sacks of flour during August. We quote prices as follows: Patent spring, $4.60 to $4.70; patent winter, $4.25 to $4.50; straight roller, $3.90 to $4.10; extra, $3.40 to $3.50; superfine, $3 to $3.15; fine, $2.60 to $2.75; strong bakers', $4.10 to $4.25. A fair turn-over for local wants is noted in meal, outside of which demand is slow. Prices range as follows: Granulated, bbls., $4.10 to $4.25; rolled, bbls., $4.10 to $4.25; standard, bbls., $3.95 to $4.05; granulated, in bags, $2 to $2.10; rolled, in bags, $2 to $2.10; standard, in bags, $1.90 to $2. Bran, per ton, $13 to $13.50; shorts, per ton, $14 to $15; mouillie, per ton, $19 to $22.

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WM. & J. G. GREEY 2 CHURCH ST. TORONTO

This is how it works in the West:

Guelph, August 27th, 1892.

MESSRS. WM. & J. G. GREEY, 2 Church St., Toronto, Ont.

Gentlemen,—I have had the Little Wonder Reel working now some weeks. I am well pleased with it. It is the best bolter I have ever seen, and is three or four times the capacity of the centrifugal which it displaced, although it has considerable less cloth surface. I can endorse it in the strongest terms.

Yours truly, E. J. PRESANT.

And here is a Voice from the East:

Cornwall, June 16th, 1892.

WM. & J. G. GREEY, Toronto.

Dear Sirs,—It is now about two months since I put in operation the Little Wonder Reel purchased from you, and am glad to say it has given me entire satisfaction. I would not part with the machine for $1,000 if I could not get another. The same is doing much more and far better work than the hexigon I displaced, and I cheerfully say that your Little Wonder Reels are the best I ever used and all you represent them to be. Wishing you the success you deserve,

I remain yours truly, JOHN MUNROE.

What the Little Wonder will do

It will take all the flour out of your shorts and leave it ready to go to flour bin.

It will bolt any stock that is difficult to handle on any other reel.

It will redress all your flours from the other reels, improving its dress and color.

It will thoroughly dust your middlings, and the flour will be fit to go to flour bin.

It will do any kind of bolting or scalping better than any reel in the market.

It will show you where you were losing money and where you can save it.

Try one on your worst stock and you will use no other machines. Sent out on thirty days trial. Satisfaction guaranteed or no sale.

WM. & J. G. GREEY

Office of the CANADIAN MILLER,
September 15, 1892.

THE GENERAL SURVEY.

THE logic of the statisticians, who, for the past few years, have been minimizing the wheat-producing capacity of this North American continent, is, to apply the language of the sporting ring, being somewhat badly bruised just now. When the crop of last year in the United States reached the phenomenal figure of 612,000,000 bushels, and that in Canada was, relatively, as large, we were told that the conditions were phenomenal, and could not be fairly taken as a basis of argument. Perhaps not; but 1892 is here, and if the yield in Canada and the States does not reach the figures of a year ago, they are approaching very closely to them. Clearly there will be, for another year at least, no lack of breadstuffs for home consumption in America, and after these multitudes have been fed there will still remain, to use a scriptural term, many basketfuls of surplus.

What to do with this surplus is a problem of serious import in grain circles at the present time. The surplus of 1891 is not yet disposed of, and, added to the assured surplus of this year, it tells of an immense quantity of wheat to find, if possible, a market somewhere. These conditions become a matter of yet deeper concern to many in the trade because of the great losses that were made in not a few quarters last year. A writer in the New York Bankers' Magazine is disposed to reproach his own people for their lack of foresight in sizing up the situation as they did a year ago. "From being the best informed people in the trade," he says, "they have been the worst deceived, the past year, as to Europe's deficit and the world's supply; and they have anticipated wants that have not been found to exist, and are left with a larger surplus of old crop on hand at the beginning of the new, than since old times, before the grain carrying trade of the world was done by steam, requiring the carriage of large stocks." Disaster has not been confined to American speculators. It is an open secret that a number of those engaged in the trade in Canada, in different parts, have suffered heavy losses. A Montreal newspaper correspondent makes the statement that big losses have been made by several grain speculators of the eastern metropolis. "The steady drop in prices having given them no chance to get even, they have simply bought and lost regularly. One is said to have dropped $20,000. A grain man remarked: 'There is nothing I can ship to the old country and get my money back.' Several exporters are dropping out until times mend." European importers, it is well known, have in many cases become so severely crippled by their losses, and loaded down with heavy stocks on hand, that had cost them much higher prices, that they are not likely to be an active force in the market for some time to come.

The one great blessing of an abundant crop, which is the universal prayer of preacher and people the world over, has been vouchsafed to people the world over. But, like the white elephant of history, there are those who are asking: What shall we do with the animal? Certain economic principles will, in all these cases, despite bull or bear, prevail. However much our desire may be for high prices or low prices, where conditions are against one, these cannot legitimately, nor are they ultimately, altered. As we view the situation to-day there would not appear to be any good or sufficient reason for predicting high prices for wheat anywhere in the near future.

Coming directly to figures that would furnish in part grounds for the conclusions suggested, we find the total wheat crop of Ontario placed at 33,000,000 bushels, as against 32,500,000 bushels last year. In Manitoba and the Northwest the yield may be safely placed at 20,000,000, though the more sanguine ones place it much higher. Other provinces may be counted at 2,000,000 bushels. Roughly stated, the total yield for Canada will be 55,000,000 bushels. For local uses and seeding perhaps 35,000,000 bushels will be required, leaving an exportable surplus of 20,000,000, to which add wheat in farmers hands or elevators, and we will have in Canada a surplus for export of 30,000,000.

The situation in the United States was given quite fully in a previous review in this journal, the wheat crop being calculated at 550,000,000 bushels. Nothing has transpired during the past month to materially alter these figures. We hear from some quarters of the grain being under weight, and the statement has been made that this will reduce the first figures to perhaps 515,000,000 bushels. Taking all conditions, however, into account, it is very problematical if the yield will go below 550,000,000 bushels. So that counting the surplus of some 70,000,000 from 1891, the States will have anything from 240,000,000 to 250,000,000 bushels for export.

Naturally the situation on this side of the Atlantic is affected by the requirements in Europe. These are given in a calculation, apparently made with much care, by the Austro-Hungarian Government, a country, by the way, that occupies an important position in crop calculations this year. Its figures are: Great Britain has produced from 23,000,000 to 25,000,000 hectolitres (65,275,000 to 70,950,000 bushels), and will import from 56,000,000 to 58,000,000 hectolitres (158,928,000 to 164,604,000 bushels). France has produced 105,000,000 hectolitres (297,990,000 bushels), and will import 15,000,000 hectolitres (42,570,000 bushels). Germany has produced from 34,000,000 to 35,000,000 hectolitres, (96,492,000 to 99,330,000 bushels), and will import 5,000,000 to 6,000,000 hectolitres (14,190,000 to 17,028,000 bushels). Italy's crop is placed at 40,000,000 hectolitres (113,520,000 bushels), and imports at 9,000,000 to 12,000,000 hectolitres (25,542,000 to 34,056,000 bushels). Austria's crop 17,000,000 to 18,000,000 hectolitres (48,246,000 to 51,084,000 bushels), and imports 8.000,000 to 10,000,000 hectolitres (22,704,000 to 28,380,000 bushels). The wheat harvest of all European countries requiring to import the grain is placed at 266,800,000 to 270,800,000 hectolitres (757,178,000 to 768,530,000 bushels), and total imports required by them 114,600,000 to 123,100,000 hectolitres (325,235,000 to 349,358,000 bushels).

Such is the situation to-day, whatever changes the future may create.

WHEAT.

The local wheat market is quiet. White has sold at 71c.; red rules about the same. Spring is offered at 68c., and 65c. bid. Manitoba, No. 2 hard, 86c. west; and No. 3 hard, 71c. Montreal: No. 2 hard, Manitoba, 85 to 86c.; No. 3 do., 77 to 78c. Chicago: September, 73½c.; October, 74⅛c.; December, 76¾c. Buffalo: Spring wheat—Fairly active; frequent trades in small lots; No. 1 northern (Minneapolis), 81⅜c.; No. 1 northern (Duluth), 81½c.; Minneapolis, No. 1 hard, 84⅞c.; No. 2 northern, 77⅝c. Winter wheat—Dull and weak; No. 2 white sold at 75c.; other grades neglected. St. Louis: 68½c. for cash; 68¾c. for September; 70c. for October; 73⅛c. for December; 79⅜c. for May. Milwaukee: 68⅞c. for cash; 72c. for December. Duluth: No. 1 hard, 76¾c. for September; 78c. for December; No. 1 northern, 74c. for December; 75½c. for December. European markets: London: Beerbohm says: Floating cargoes—Wheat steady. Cargoes on passage—Wheat, more enquiry. Mark Lane, Spot, good No. 2 club Calcutta wheat, 30s. 6d., was 30s. 6d.; present and following month, 30s. 3d. was 30s. 3d.; good cargoes of No. 1 California wheat, off coast, 32s. was 32s. 3d.; do., Australian, off coast, 32s. 6d., was 32s. 9d.; present and following months, 33s. was 33s. 3d.; do., Chilian, off coast, 30s. 6d., was 31s. 3d.; present and following months, 31s. 9d. was 32s. London—Good shipping No. 1 California, prompt sail, 32s. 6d. was 32s. 6d.; nearly due, 32s. was 32s. 3d. French country markets—Mostly a turn dearer. Weather in England—Cool but fine. Liverpool—Spot wheat, steadier.

BARLEY.

In the Scribe page Mr. W. D. Matthews, who is one of the largest barley handlers in Ontario, and than whom there is perhaps none better posted, does not hold hopes of a very important barley trade this year. The McKinley Bill has discouraged growers, so that the yield will be the smallest for a number of years. Exports last year were only a trifle over 3,000,000 bushels, and of this about 1,000,000 bushels went to Britain. Prior to 1890 the annual exports of barley were from 9,000,000 to 12,000,000 bushels. Mr. Matthews is also apprehensive of the quality. The present market is of course about nil. Little is being offered or asked for. The Oswego report is that market for Canada barley is wanting alike in sales, receipts and shipments.

OATS.

The trade in oats has been exceedingly slow throughout the month. Locally, old are worth about 33c., and new 32c. on track. Buffalo: No. 2 white, 38½c.; No. 3 white, 36¼c.; No. 2 mixed, 35½c.; No. 2 white, clipped, 34c. Oswego: extra, No 1 white, 43c.

PEAS.

Oats dull, prices from 59 to 61c. The new crop is said to be of a very various character.

RYE.

Rye nominal at about 58c.

FACTS ABOUT HIGH MILLING.

HIGH or gradual-reduction milling, called also Vienna, Austrian, Hungarian, Prague and Saxon milling, had its origin, and has reached its fullest development in Austria.

In the year 1800, flour mills in that country and elsewhere were of primitive description, consisting of hopper, millstones, and a rude grading sieve. The wheat was usually damped before grinding, and the grinding was as fine as possible, only the coarser particles being separated by means of a sieve. The bran was in many cases picked off with a small shovel, leaving behind tolerably fine clean middlings, known commercially as Vienna middlings. As the demand for middlings increased, reduction by grinding was performed less abruptly.

About 1810, Ignaz Paur, a millowner of Leobersdorf, simplified the troublesome process of sifting middlings on dishes by inventing a rude purifier. He thus produced the first fine purified-middlings flour, or patent flour, and so became the father of high milling. His purifier was built by N. Winter, cabinet-maker, in Leobersdorf, and duplicates were sold to Huppman, of Baden, near Vienna, and Spuller, of Gutramsdorf.

The Baden flour and bakery soon became celebrated, and when, in 1811 or 1812, the master baker, Gerber, moved to Vienna, his kippel and buns drew such crowds that the police were required to keep order before his shop. Thus the demand for strong white glutinous flour grew rapidly.

In 1826 Paur built a mill at Lichtenwoerth, the purifying department of which served as a model in the Vienna district. About the same time Mittermueller introduced dusters for cleaning wheat. Geo. Volk was the first to use elevators in Austria.

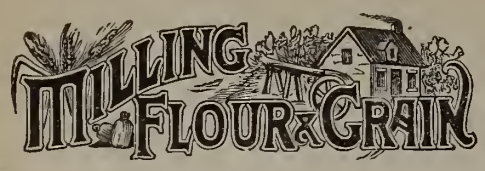
Between 1830 and 1840 Vienna milling, which had meanwhile been introduced in Switzerland, was greatly improved by the use of cast iron in hursts and gears. Between 1840 and 1850 the size of millstones was increased and the grinding surface extended to the circumference. Flour reels also came in, and steam power began to be employed. The period 1850 to 1860 was marked by the transition from damp to dry milling, a change which yielded whiter flour and added to the durability of its strength. Between 1860 the roller mill of iron, steel or porcelain came into prominence, and its use increased so rapidly that now it is almost universal among merchant mills throughout the world.

THE GRAIN WEIGHT.

THE grain, the smallest weight in use, was thus called from being originally the weight of a grain of wheat. A statute passed in 1266 ordained that 32 grains of wheat taken from the middle of the ear or head and well dried, should make a pennyweight, 20 of which should make an ounce, while 12 ounces were to make a pound. The pound, therefore, consisted of 7,680 grains. Some centuries later the pennyweight was divided into 24 grains, which makes the troy pound, as now used, 5,760 grains.

TRADE NOTE.

The Waterous Engine Works Co. (Ltd.), of Brantford, Ont., report a large order from Isaac Warcup, miller, Oakville, Ont., for grip gears, pulleys and couplings; also an order from the Royal Electric Co., Montreal, Que., for a 93x22 pulley, 300-h.p., and pulleys for dynamo. Evidently the grip pulley is on top.



CANADA.

A NEW farmers' elevator is being built in Holland, Man.

A LARGE barley crop is expected in the Prince Albert district, Man.

W. D. MACE, of Tamworth, Ont., is about to add a set of rollers to his mill.

THE annex elevator at Fort William, Ont., will hereafter be known as elevator "C."

THE construction of A. McLaren's flour mill at Cobden, Ont., is being pushed forward.

J. E. WISE has bought an interest in the oatmeal mill of T. F. Quinn at Westminster, B.C.

THE Farmers' Elevator and Milling Co., Ltd., Alexander, Man., has applied for incorporation.

THE flour mill at Carberry, Man., has been remodelled and is now being operated by Rogers & Co.

THE new flour mill and grain elevator of Geo. Esterbrook, Tweed, Ont., is now completed and in running order.

THE Wolverton Milling Co., Wolverton, Ont., have made an addition three stories high by twenty-four feet wide to their mill.

C. N. BROWN, for the past two years manager of Hilliard & Peplow's flour store, Peterboro, Ont., has purchased the business on his own account.

A FARMERS' elevator will be built at Indian Head, Man., and another at Sintaluta, each to have a capacity of 30,000 bushels, at a total cost of $14,000.

MESSRS. Hay Bros., of Listowel, Ont., do not intend to rebuild the flouring mill burned down recently, but will enlarge their elevator for the grain business.

CHARLES ARMSTRONG, Guelph, Ont.:—The CANADIAN MILLER fills a long-felt want as a paper devoted alone to the interests of Canadian millers and grain merchants.

THE barns of Samuel McMaster, of Glenwilliams, Ont., containing all this year's crop and a quantity of last year's wheat, was destroyed by fire a few weeks ago. The loss is heavy.

J. L. WADE, flour merchant, Hull, Que., is in financial difficulties and has left the town. Messrs. Warnock & Martin, of Ottawa, and Durocher, of Hull, have taken possession of his premises.

AN Ontario miller has offered to build a 125-barrel mill at Napinka, Man., if the municipality will grant him a bonus of $5,000. At a meeting of citizens recently held the proposition met with general favor.

COMPLAINT is made by millers in British Columbia that the farmers of the coast are playing the trick of putting indifferent oats at the bottom and good ones at the top of the bags of grain sold to the millers.

MR. PLEWES, of Kimberly, Ont., has purchased the machinery of the Fairmount mill, which has only been in use a few winters, and will place it in his own mill, besides making other important additions.

A SHIPMENT of 25,000 bushels of Manitoba wheat was received at Martin & Warnock's elevators, Ottawa, Ont., a fortnight ago. This firm is shipping large quantities of flour daily to Montreal and St. Henri, Que.

A CONSIGNMENT of choice two hard wheat has been sent from Emerson, Man., to England via Montreal. This wheat was grown in the vicinity of Emerson, and is shipped directly to millers, who will test its merits.

AN examination of the papers of G. H. Lee, the absconding St. John, N.B., lawyer, showed that he had speculated extensively in the New York, Chicago and Boston markets. His shortage will foot well up to $90,000.

THE partnership heretofore existing under the firm name of Bickle & May, millers, Petrolia, Ont., has been dissolved by mutual consent, and Mr. Samuel May will go it alone in the future under the firm name of Samuel May & Co.

WM. POLLARD, of Grey, Ont., has a crop of Egyptian oats that is a marvel as far as growth and promise are concerned. Out of a sample five heads were counted 107, 109, 118, 129 and 134 grains respectively. The heads average nearly ten inches in length.

THE J. C. McLaren Belting Co., of Montreal and Toronto, have just completed a belt 50 inches wide by 140 feet long, made of English oak-tanned leather, to be used by the Electric Railway Co., of Victoria, B.C. This, we understand, is the largest belt of the kind this firm has ever manufactured.

A. W. HASTINGS, of the Lake of the Woods Milling Co., Montreal, Que., is in Manitoba in the interests of his firm, which will buy wheat largely now that its Portage mill is finished, as its orders on hand will keep both it and the Keewatin mill going for some time.

APPLICATION for letters patent of incorporation has been made by the Patrons' Elevator, Milling and Supply Co. for the purpose of establishing an elevator, mill and various other industries at Boissevain, Man. The amount of the capital stock of the company is to be $48,000, divided into 1,920 of $25 each.

FINLAY SMITH, of Hong Kong, China, is visiting Winnipeg, Man., endeavoring to interest local merchants in the question of reciprocal trade with China and Japan. American flour now holds the market in those countries, but Mr. Smith says there is no reason why Canada should not possess the trade.

THE milling industry of Manitoba, says the Winnipeg Commercial, is immense. There are a good many small mills in the smaller towns and in Winnipeg, Keewatin (or Lake of the Woods) and Portage la Prairie the mills are very fine, ranging in capacity from 500 to 2,000 barrels per day. These larger mills are all roller, and built on the plan known as the long system. The spring wheat is very hard and flinty, and mills better on the long than the short system.

C. H. MCLAUGHLIN, of Toronto, is suing the Canadian Pacific for $2,352 for loss and damages caused by the violation of an agreement in the transhipment of five cars of barley. When they reached American territory they were forwarded over the West Shore instead of the New York Central, as per contract, and reached New York too late for the outgoing steamer to England. This delay caused serious loss through depreciation in values in the English market.

THE Brackman & Kerr Milling Co., Ltd., of Victoria, B.C., has purchased the produce and commission business of Mathers & Milligan, New Westminster, together with the extensive warehouses and wharves, which the new owners opened on 1st September. They will sell flour, the produce of their own mills, as well as grain, hay and feed. The Westminster branch will be looked after by Mr. W. J. Mathers, of the late firm, and Mr. W. H. Kerr, a brother of the managing director of the company.

THE council of the Toronto board of trade has passed the following resolution: "That in the opinion of this board it would be in the best interests of the grain trade and country generally if all terminal elevators at lake and seaboard were on and after the first of September, 1892, declared and made regular elevators; that no mixing of grades of Manitoba wheat shall be allowed in such elevators, and that in case of shipment of any mixed cargo inspection certificates shall show the composition of such cargo." The Winnipeg grain exchange had previously passed a similar resolution and asked eastern boards to concur therein.

THE Great Western flour and oatmeal mills, Woodstock, Ont., were totally destroyed by fire a few weeks since. The fire broke out shortly after midnight, and before the firemen arrived the flames had gained such headway that it was impossible to save the building. The fire started in the oatmeal department, but its origin is a mystery. The Great Western mills, with a daily capacity of 500 barrels, was one of the best oatmeal and flour mills in Ontario. It was built over thirty years ago by Mr. John Watson, and was estimated to be worth $65,000. It is altogether likely that the proprietors, Messrs. McDonald & Thomson, will not rebuild. The total insurance is $30,000. The stock was worth between $5,000 and $6,000, and was a total loss.

THOMAS STEACEY, Lansdowne, Ont., has experienced an unusual development of grain crop. He sowed six acres of wheat and it came up vigorously. On 12th July the field was looked over by some of his neighbors, who pronounced it to be as fine a crop of wheat as could be seen in that locality. Now there is no sign of wheat, but a thick crop of oats on the land. The explanation given of the phenomenon is that the wheat was partially or altogether killed out by rust, and the oats sprung up from seed left in the ground last harvest when a crop of oats was taken from the field. Mr. J. A. Webster, just across the road from Mr. Steacey, has a similar change on one of his fields, but not to as great an extent. He sowed barley and the crop is nearly all oats.

THE jurors of the seed wheats and flours exhibited at the International Milling and Baking Exhibition have this to say of a splendid sample of No. 1 Hard Fyfe wheat amongst other Canadian wheats entered—but not for competition—by Sir Charles Tupper, K.G.C.M.G., C.B., High Commissioner for Canada, and Mr. Archer Baker, the European Traffic Agent of the Canadian Pacific Railway Co.: "That the wheat shown in the large glass vessel, No. 1 Hard Fyfe, would be most valuable to the British millers for mixing with English wheat, as when milled together it would give a flour of great strength and good flavor. A large produce in baking would be the result; and we only hope that in future a good bulk of it will find its way to this country. The No. 1 Hard Fyfe wheat also recommends itself of great value, from a millers' point of view, not only in the above-named points, but also on account of its clean condition and uniformity." Had these samples been in the competition they would have secured the champion prize; as it is the champion prize was awarded to a Canadian-grown Red Fyfe entered by the Government of Manitoba.

GENERAL.

THE wheat harvest of France is an average.

THE Minister of Agriculture estimates the wheat crop in Italy for 1892 at 13,900,000 quarters, against 17,190,000 quarters last year.

REPORTS from Kansas say that out of 106 counties in the state seventy show corn condition about seventy-five per cent. of a crop and wheat yield the largest on record.

IT is said that C. P. Huntington will furnish heavy financial backing for an inter-oceanic railway in Honduras, which will provide a short route across the Isthmus of Panama.

FOR the year ending June 30, 1892, the exports of wheat from the United States were 157,280,351 bushels, and of flour 15,196,769 barrels, the total representing 225,666,311 bushels.

NATAL, South Africa, imported in the fiscal year of 1890-91 flour and bran valued at £106.010, of which £95,579 worth came from Australia, £3,084 from the East Indies, and £2,511 from Cape Colony.

THERE are many millers looking toward Duluth, anticipating that here will be the great flour city of the country. Duluth and Buffalo, it is conceded, will be the great rivals for the first position, with advantages decidedly in favor of the former.

INDIA, with the exchange rate of silver much degraded, is now able to offer wheat at 30s., where a year ago 33s. only gave the same return to growers. But it would seem that already India shippers have largely entrenched on the export surplus available, and future shipments are likely to be on a very moderate scale.

THE Central Elevator company system of elevators consisting of about fifty grain elevators along the Memphis & Minneapolis & St. Louis railroad, has been purchased by F. H. Peavey, the well-known elevator man. The deal is the largest that has ever occurred in this section for years, the cash consideration being $1,160,000.

THE Eureka Transportation company, which has nearly 5,000 cars leased to millers and grain dealers, has issued a circular to those in the Southwest announcing that all cars must be unloaded within twenty-four hours or demurrage will be charged at two dollars per day. The large movement of grain in the Southwest has necessitated radical action on the part of carriers.

ACCORDING to the Liverpool Mercury, the first grain cargo to enter the Manchester canal, or rather that portion of it which is finished, was brought by the Francesco Gotuzzi from the River Plate, and was discharged at a point eleven miles up the canal, that is to say, at the extreme end of the section open for traffic. The description of the grain is not given, but the cargo is said to have been consigned to a firm of Warrington millers.

THE Austro-Hungarian consul-general at Barcelona reports that the flour imports of Spain are an ever-diminishing quantity. In 1888, he says, 38,000 tons of flour were imported; in 1889, but 10,000 tons; while 1890 and 1891 are respectively credited with the moderate items of 500 and 244 tons. A dissection of the latter figures showed 198 tons of French and 46 tons of Hungarian flour. On the other hand the export flour trade of Spain was reckoned at 41,948 tons for 1891, being an increase of about 4,000 tons on 1890. The bulk of this flour was doubtless taken by the Spanish colonies.

IT looks as if the whaleback is to pass beyond the condition of mere experiment and to become an active reality in the near future. The names of the promoters of the Whaleback Steamship Company, Ltd., are alone a sufficient guarantee that the purpose for which it is formed will be carried out. Wm. Johnston & Co., of Liverpool, whose motto is "more and more," and whose steamers are almost as well known as the "clan" liners, will be the managers; two of the partners of Ross T. Smyth & Co., Liverpool, also sign the memorandum of association, giving four English supporters, to which are added two New York bankers, A. McDougall, ship-builder, of Duluth (on the American shores of Lake Superior), and Chas. W. Wetmore, after whom the first whaleback was named. The company acquires the patents taken out in America, England and elsewhere by Mr. McDougall for the construction of vessels of this type, and the capital is a quarter of a million sterling in shares of £10 each, which amount will be easily raised by the names above given.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 12th of each month to insure insertion in the following issue.

INSURANCE—FIRE AND MARINE. MILLS, manufactories and merchandise a specialty. Telephone at my expense.
R. CUNNINGHAM, Guelph.

WANTED TO RENT

A FULL ROLLER FLOUR MILL, WATER power preferred. Address
MILLER, Box 50,
Castledore, Ont.

ROLLER MILL FOR SALE.

ONE HUNDRED BARREL ROLLER MILL for sale, or partner wanted with a few thousand dollars capital, in a splendid section of Manitoba.
Address X,
care CANADIAN MILLER.

MILL DWELLING-HOUSE, LAND, ETC. FOR SALE.

FIRST-CLASS POT AND PEARL BARLEY Mills, Buckwheat Flour, Chopping, etc.; kiln for split peas; good water power.

There is good business done for years. A portion of purchase money can be left on mortgage for a term of years.

Reasons for selling, want to retire from business.

Apply to A. G. MORTIMER,
CANADIAN MILLER.

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OF VALUABLE

MILL and FARM PROPERTY

THERE WILL BE SOLD BY PUBLIC AUCtion, at the front door of the City Hall, in the City of Guelph, on

WEDNESDAY, THE 21ST DAY OF SEPTEMBER, 1892

at the hour of 11 o'clock in the forenoon, all these valuable properties, known as

Firstly—The **ROCKWOOD MILLS,** consisting of parts of lots 4 and 5 in the 4th concession of Eramosa, containing between 3 and 4 acres of land. There is a splendid 2½ storey stone mill on this property, with all necessary outbuildings, 4 run of stones, capacity 125 barrels, 25-feet head, and all necessary machinery, in good running order. Also first-class stone dwelling house containing 14 rooms. Also good shingle and heading factory, 22-feet head, and about 25 yards from mill. Splendid water privilege.

Secondly—That valuable farm property, consisting of the east half of lot number five in the second concession of the township of Eramosa, containing 100 acres more or less, on which is erected a house and good barn. The farm is situate on the York Road, about 5 miles from the City of Guelph.

TERMS OF SALE.—10% in cash at the time of sale, balance of one-half purchase money within 30 days from date of sale, remainder to be paid in cash within 30 days or may remain on mortgage at 6% per annum, at the option of the purchaser.

Further particulars and conditions of sale may be made known on application to JAMES TAYLOR, auctioneer, or to

Macdonald & Macdonald,
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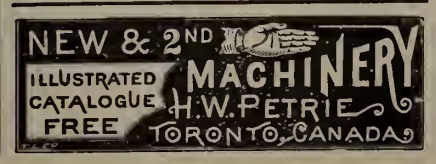

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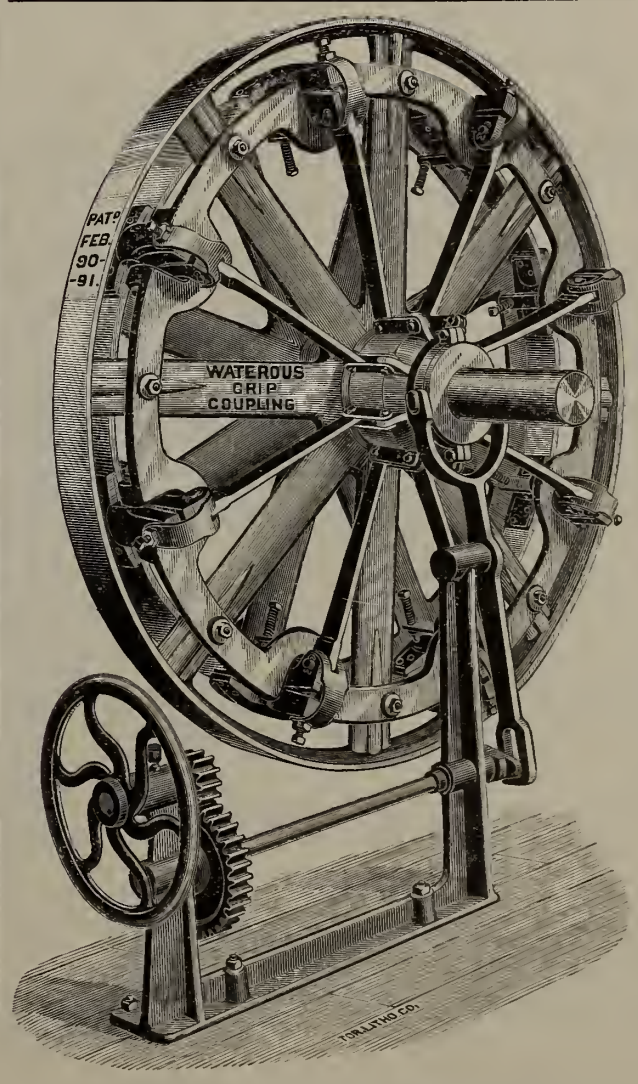

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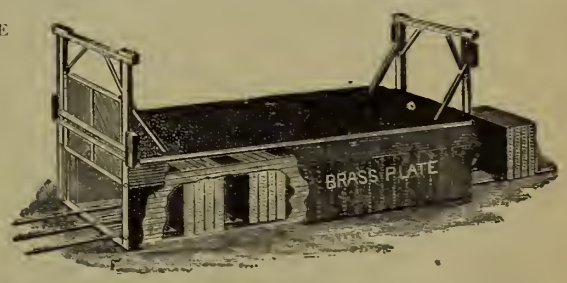

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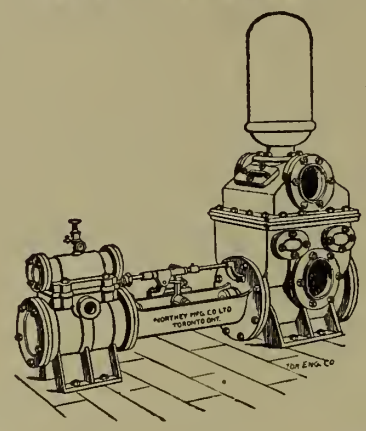

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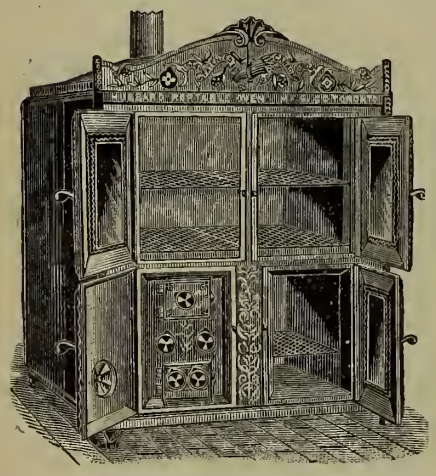

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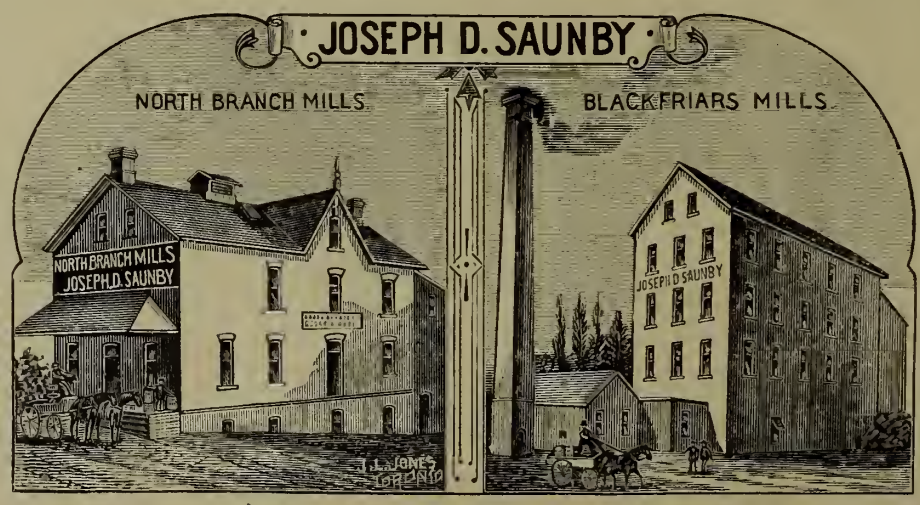

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Old Series, Vol. X. } Number 10.
New Series, Vol. II. }

TORONTO, ONT., OCTOBER, 1892

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BLENHEIM ROLLER MILLS.

BY far the most important industry in Blenheim, Ont., are the roller mills of Campbell, Rutherford & Sinclair. The mill building proper is a five storey brick structure, with mansard roof, forty-eight by forty-eight feet in dimensions. It contains fourteen pairs of rolls, and all other requisite machinery for the manufacture of a superior quality of flour. Adjoining the mill on the east is an elevator building, forty-two feet square and eighty feet in height. It has a storage capacity for 50,000 bushels of grain, the machinery being capable of elevating 1,000 bushels per hour. The mill has a capacity for turning out 250 barrels of flour daily. For convenience of shipment a spur a quarter of a mile long extends from the mills to the main line of the Erie and Huron railway, which has a close connection with the Michigan Central, the Canadian Pacific, and the Grand Trunk railways. It is estimated that out of the 300,000 bushels of wheat annually grown in this vicinity and marketed in Blenheim, at least 250,000 bushels are converted into flour by Campbell, Rutherford & Sinclair, the product being shipped mainly to the Maritime provinces.

Blenheim possesses a soil that in some respects is peculiar. Whilst it is a most productive locality for fall wheat it is also a section of country where some of the best corn of the province is grown. By some agriculturalists this is not considered very probable, for the reason that corn requires hot weather with frequent showers, while wheat, at least when it is filling and ripening, needs just the opposite kind of weather. "This is explained," said a member of the Blenheim Roller Mills concern, "in this way: Fall wheat, up to the time it enters the milk state and begins to fill, stands the rainy weather all right, hence the spring rains are good for both the wheat and the corn. About the time the wheat begins to fill the spring rains are slacking up and the weather gradually gets warmer, which is good for the corn and not detrimental to the wheat until it arrives at the hottest summer heat with warm parching winds, which, as a rule, does not occur until the fall wheat is filled, and hardening, after which, such is the length of the season and the heat of the second half of summer, the corn has plenty of time to fully devolop and ripen. Our fall wheat is early enough to escape the weather that ripens the corn, hence the season is capable of bringing both to perfection. The soil in this district is largely composed of a rich gravel loam, the last ground upon which anything is frozen in the fall and the first to support vegetation in the spring. And when you add to this the facts that the land slopes south to Lake Erie and that we are in a direct line seventy miles south of Toronto, we think we can lay claim to being the richest part of the Dominion in the variety of cereals we can grow."

Blenheim Roller Mills.

IS PERPETUAL MOTION POSSIBLE?

THE reply to this question, says the Scientific American, depends entirely upon the limitations put upon the term "perpetual motion." If we understand these words to mean a machine that would start itself, furnish power for doing work, and continue in operation so long as required, or until worn out, without the assistance of any external agency, we may say with the utmost confidence, perpetual motion is impossible.

If, on the other hand, we define perpetual motion as a machine dependent for its action upon the variability of one or more of the forces of nature, we may say perpetual motion is possible. The thermal motor, in which expansion and contraction are produced by natural changes of temperature, is an example of a motor of this kind. In this machine, the changes in volume in a body are made to store energy to be used in continuous regular work. A perpetual clock has been made on this principle.

Sun motors of various forms have been devised, which might be used in connection with storage mechanism for furnishing power continuously. A sun motor of sufficient size with a suitable storage system, could furnish power the year round in almost any part of the world; success being a question of hours of sunshine and capacities of motor and storage system.

Of course, what is said with regard to the sun motor applies with equal force to water wheels, windmills, tide and wave motors. Without doubt, all of these prime movers will come more and more into use as time advances, and storage systems are perfected. Still they do not satisfy the seeker for the ideal perpetual motion. This should fill the conditions first mentioned; but, as we have already said, this is an impossibility.

The first and strongest reason for making this positive assertion in regard to the ideal perpetual motion is found in the fact that never in the history of man has he been able to make a single atom of matter, or create the smallest fraction of a unit of energy.

All the works of man, of whatever name or nature, have been constructed of materials already in existence, and all the work done by man and his enginery has been accomplished by using current natural forces, such as the gravitation of water, the power of the wind, and the heat energy of the sun, or the stored energy of coal and other fuels, or of chemicals.

Having the command of some of nature's forces, inventors have sought to circumvent nature's laws, so as to make water "run up hill," to cause masses of matter to act alternately in accordance with and in opposition to the law of gravitation; in short, to deprive matter of gravity while ascending, and cause it to act with the full force of gravity while descending.

Among perpetual motion devices of this class, proposed and tried, is the one having weights arranged on a wheel in such a way as to fall outwardly and increase the leverage on one side of the wheel, while they fold in and diminish the leverage on the opposite side of the wheel. This machine, it is needless to say, has never moved on its own account, although it has become classic.

In this device, the superior number of weights on the side where the leverage is least, exactly balances the weights at the ends of the extended arms. This is true of all the modifications of this type of machine.

A favorite device of the perpetual motion inventor is that of weights arranged around the periphery of a wheel and counterbalanced by springs on which gravity has no effect. Such weights being balanced are supposed to be capable of being moved upwardly in opposition to gravity without the expenditure of much power. After having been elevated, the weight, while maintaining its position relative to the wheel, descends, causing the rotation of the wheel. After it has done its work the weight must be restored to its original position before the operation can be repeated, and here comes the rub. Many very ingenious plans have been tried to accomplish this, but the result has always been a perfect balance.

In another device the attempt is made to utilize the Archimedian screw to elevate water to be used for driving itself. The inventors in this case fail to notice that although the water is running down an incline in the screw, this incline is always being elevated, so that the water must be actually carried up an inclined plane by a force as great as it would exert if allowed to descend through the same distance. In all these cases friction is left out of the question.

Capillarity has been tried as a means of elevating a liquid to be used as a motive agent, but in this case, as in all others, the defeating element is present—the surface tension of the liquid prevents detaching the liquid from the upper end of the capillary conductor.

It seems strange that in these days the proposition should be made to run an electric motor with a current from a dynamo by the power derived from the electric motor, yet, absurd as this proposition is, it has often been broached in good faith. A mere superficial examination of this subject shows that the losses incurred in transforming the current into motive power, and vice versa, are such as to defeat any attempts of this kind. The permanent magnet appears to have suggested itself to many as a possible solution of the problem, and experimenters have searched the world over to find an insulator of magnetism to act as a cut-off for releasing the armature after it has been drawn forward toward the magnet; but no such material has been found. Nature, in this case as in all others, refuses to yield energy without its full equivalent of energy in some other form, and the law of the conservation of energy is found to hold good.

Although the efforts of inventors in this direction have been barren of results of the kind aimed at, yet their labor has not been fruitless; many experimenters who considered actual trial better than any amount of study or calculation have learned that "knowledge comes of experience," and while discovering the fallacy of the ideal perpetual motion, they have been led to consider more practical subjects; making inventions which have proved beneficial to the world and profitable to themselves.

If the inventor of machines intended to be self-moving will not accede to Newton's statement that "action and reaction are equal and opposite," (third law of motion), and that there is a perfect and wonderful balance in the forces of nature, let him thoroughly acquaint himself with the principles of physics, and he will ere long be able to say with certainty just how the balance will occur in any and every perpetual motion machine of the ideal kind, and admit that he has not the power of creating energy.

NORTHWEST OBSERVATIONS.

OPINIONS OF AN ONTARIO MILLER.

TO a miller visiting Winnipeg perhaps the most disagreeable thing which he encounters is the constant complaints which the dealers there insist on loading on him with regard to the shortages in weights of cars sold to Ontario millers. That these complaints are without a shadow of foundation there can be no doubt, as has been proved over and over again, but there must be some reason for these complaints, and we will attempt to solve the mystery. It is well known that the local elevator man or buyer has to make heroic efforts each year to make his grain in the elevator come out even with his buying, and in consequence he has to weigh very closely, in fact, we are inclined to believe, sometimes too closely, and the result is that his principal bills the cars at the figures furnished by the buyer and when the inevitable shortage is reported he of course kicks. In a great many cases there is not the slightest ground for a "kick," as has been proved by actual results obtained from two of the most prominent firms doing business in Manitoba wheat in the city of Toronto—one showing a shortage of less than a hundred and fifty bushels on two hundred and fifty cars, the other reporting shortages on a dozen cars and an overage of five out of nearly a thousand cars. If these gentlemen at Winnipeg have any serious grievance in this direction why do they not refer the matter to the Boards of Trade and let them take such action as will put an end to it instead of maligning all those engaged in the milling trade and making things excessively unpleasant for those millers who have the hardihood to visit the Northwest.

× × × ×

Millers and dealers are alike awaiting with anxiety the advent of the new standards for Manitoba wheat. There is one certainty about the matter, they cannot be worse than they were last year unless they took the old wheat to make them. The leaders of the syndicate have been in a terrible state of indignation for the last four months because the men who buy their wheat had the unparalleled impudence to ask that they have representation on the board who fix the standards. Their agony over the probability of material changes being made with regard to the settling of disputes between the inspector there and any other is simply awful and we are very sure they will have the heartfelt sympathy of all the eastern millers—with a hook. They were not content to compel the poor unfortunate Easterner to go to Winnipeg in case there was a dispute, but before he could get a hearing he was compelled to put up fifty dollars of the Queen's money "as a guarantee of good faith." Of course this latter was not quite in accordance with the law, but a little thing like that does not seem to trouble them, as they are like the heathen whom St. Paul mentions, "They are a law to themselves." That the whole inspection needs overhauling is now patent to any honest onlooker. Just a few minutes before the time of writing this we were in a prominent grain dealer's office when the inspection of two cars of wheat was being discussed by several experts and they all came to the conclusion that of two cars inspected by the same man at Winnipeg the one inspected as No. 2 hard was very much better than the one which received a No. 1 hard grade and they were inspected within two days of each other. Sometimes it makes a difference whose ox it is.

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The manner in which those who wish to build independent elevators in Manitoba are treated by the railway companies is provoking a good deal of hard feeling there. The farmers around Rosebank, on the Northern Pacific, had subscribed sufficient stock to build a very handsome elevator at that point and when they came to make terms with the company they found that the only terms upon which they could obtain a half acre of land worth five dollars and a switch, was by a lease for five years with a cancellation clause which provides that they may at any time on giving thirty days notice demand the land, and if in that time the elevator be not removed it becomes the property of the company. These terms were not accepted by the farmers' company, and the N.P.R.R. are out to the tune of from 125,000 to 150,000 bushels of freight, as the farmers will team it across country to the C.P.R. points where there are farmers' elevators. The only apparent reason we can give for this is that the railway company are following this course with a view to helping the well organized rings of grain buyers in Winnipeg. This matter has a very serious aspect for the milling fraternity as it renders it next to impossible for any eastern miller to put a buyer on at such points unless he is willing to accept the grading of a rival concern, a thing which no one who has not taken leave of his senses would consent to do. That such a state of affairs should exist is a standing disgrace to the railway systems of the country and our Boards of Trade and the Dominion Millers' Association should take immediate and vigorous measures to have this matter made right. We are inclined to think that a little pressure in the proper quarter would remedy this evil.

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The farmers of Manitoba and the Northwest Territories are, as a rule, a highly intelligent class of men, but, like the best of us, they sometimes make mistakes that tell against themselves in a way they little expect. This has been very well illustrated by the policy which they have been following this season with regard to their wheat crop. They have persistently boomed the country at their own expense by announcing that their expected out-turn would be much greater than even they themselves had any expectation, and in consequence the markets have opened at so low a figure that they will not be able to pay the cost of preparing the ground, seeding, harvesting and marketing the grain. If, on the other hand, they had announced the truth that the crop was a light one, there is no doubt but they would have benefitted largely by the competition for their grain, which would naturally have followed. Reports from all parts of Manitoba go to show that the results as shown by the threshing machines are rather more than disappointing. A big yield, it is true, may serve to temporarily boom the emigration, but if prices continue as they are the advantage gained on the one hand will undoubtedly be lost on the other. However, we cannot say much about the folly of others when we have a class of men in the east who, being chronic "bears," have been just as persistently forcing down the price of grain, presumably in the interest of the millers, forgetting that nearly every merchant mill in the country is loaded up with dear flour, which, if markets are badly broken, will have to be sold at an enormous loss. It is just possible that these "would-be bears" have the idea that they can buy cheaper than any one else, and thus make up for the loss on the stocks in hand, but they forget that experience goes to show that they have never been on the "bull" side long enough to give their customers a chance to make a reasonable profit on their purchases. Hind sight is all very well when we are at the right end of the gun, but we would advise our friends to take a glance at the foresight occasionally if they expect to get any game.

OBSERVER.

A DIFFERENCE OF OPINION.

THE Commercial, of Winnipeg, has the impression that the people of the east entertain altogether too "exalted an idea of Manitoba's crop this year." The writer of "Northwest Observations" deprecates this same practice of "booming" the new crop by sending forth exaggerated reports of its size. In this matter, however, he would not hold the Manitobians themselves altogether guiltless. "The Manitoba crop," says the Commercial, "is not an enormous one. It is a good many bushels per acre short as compared with the very large crop last year, and threshing returns show that the yield of wheat is not up to the official estimate of 22.7, as shown by the August crop bulletin, which estimate, however, is only given as a preliminary one. In some sections the crop is light, but the average for the province is fairly good. Manitoba has not, therefore, produced a remarkably large wheat crop this year, but simply what may be called a good crop on the average. In Assiniboia territory, west of Manitoba, the crop is lighter than the average for Manitoba." Tell the truth and fear the Old Fellow himself may have even a commercial application.

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INTERVIEW WITH PRESIDENT M'LAUGHLIN.

GRAIN AND MILLING IN MANITOBA.

"MY stay in Winnipeg," said Mr. M. McLaughlin, president of the Dominion Millers' Association, to a representative of the CANADIAN MILLER, "though brief, was very enjoyable." This popular Toronto miller had been called west in connection with his duties as member of the board for fixing the standards of Manitoba grain. "The board for the first time," continued Mr. McLaughlin, "comprised representatives of the milling interests, and also two of the most intelligent farmers of Manitoba, representing the agricultural interests. Mr. W. W. Ogilvie and myself were the millers of the board. Fully 250 samples of grain were submitted for our inspection, almost every district of these territories sending samples. I must say that, taken altogether, seldom have I seen a better lot of grain. Some, it is true, was somewhat smutty, and after careful deliberation it was agreed by the board that this be graded as smutty, and a new grade so termed was fixed. Smutty wheat will be known on the market as "smutty" wheat. This conclusion may be taken as an index of the harmony of opinion existing between the farming and milling interests. It was realized by the board, and by its milling and farming representatives in particular, that farmers and millers were alike interested in the growth of a fine quality of wheat; and where extra care was needed to avoid that which would prove derogatory to the quality, as in the case of smut, everyone should be anxious to have this care exercised. The farmers of Manitoba take a large and, I believe, just pride in their country as a wheat-producing country, and they appreciate the fact that every bushel of imperfect grain that goes from Manitoba is a reflection detrimental to Manitoba; and contrawise the knowledge that Manitoba grain is in the main possessed of all the best qualities of first-class grain is a compliment that will return to them interest ten-fold, yea a hundred-fold, in the future."

"Very little frost has been experienced in Manitoba this season and consequently the percentage of frosted wheat will be less than formerly. The board decided to do away with the term 'regular' as applied to frosted wheat last year. It is misleading, particularly to foreigners, and frosted wheat will be graded 'frosted' wheat. Nothing like being honest in these matters."

Asked as to the position of Manitoba as a milling country Mr. McLaughlin replied "that outside of Hungary he did not know of any country in the world better fitted by nature to become a great milling centre. There could be no doubt about its capabilities for producing the best milling wheat, and its natural water power, now going to waste, was the finest he had ever seen. He considered Manitoba's future in this respect assured."

"Let me tell you one thing I admired about the people of Manitoba," remarked Mr. McLaughlin in concluding this interview. "The people have unbounded confidence in the possibilities of their country and the future that is before them. They are a live, pushing, keen lot of men, whether business men or farmers. Do you know they have active, working Boards of Trade in nearly every town in the province? Something we cannot claim in this province. You hear no blue ruin or Goldwin Smith pessimism preached in that country. If the people of the Dominion as a whole had the same confidence in their country as Manitobians have in Manitoba a different condition of affairs would exist in the Dominion to-day."

BRITAIN'S COMMERCE.

A SERIOUS commercial depression hangs over Great Britain at the present time. In some respects this is felt chiefly in the agricultural districts where conditions are most discouraging. For over twenty years there has been a steady decrease of wheat acreage largely because of the continued depreciation in prices. In 1868 the wheat crop covered 3,652,000 acres; in 1892 it occupied 2,219,839 acres. Farmers say that with new wheat at 31s. it is labor and capital thrown to the winds to sow wheat. Exports have fallen off during the eight months of this year fifteen and a quarter millions, as against the corresponding months of 1891.

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VIEWS AND INTERVIEWS.

First Wheat In America.

The first wheat raised in the new world was sown on the island of Isabella, in January, 1494, and on March 30 the ears were gathered. The foundation of the great wheat industry in Mexico is said to have been three grains carried into that country by one of the slaves of the Cortez company. The first crop of wheat raised in South America was grown by a monk in the garden of a convent at Quito. Garcilazo affirms that up to 1658 wheat bread had never been used as an article of diet by the people of Peru.

Grain Shipments Via Pipe Line.

The residents of the Windy city are nothing if not bold. Take a Chicagoian and he is prepared to go a pretty big venture at any time. One of these who is just now bringing to himself some fame in the commercial world is Mr. N. E. Beasley, who announces that he has invented a pipe line system which is practical for the shipment of grain. He proposes to lay pipes from Chicago to the Atlantic coast and to transport grain that distance for three cents a bushel. The grain is to be carried in a continuous ventilated shaft, the inventor claims, without friction; and a continuous stream will move at the rate of ten miles an hour. The power stations are to be twenty-five miles apart and the line from Chicago to the coast will cost $20,000,000.

Bread In Folk-Lore.

In Morvan there are rocks called the Rocks of Armoyon, a district of Chatain. It appears that formerly, when the hours of midday and midnight struck, a loaf of bread appeared on their top (and perhaps a bottle), which disappeared at the twelfth stroke. In Haute-Bretagne they say that during Easter night all the stones are metamorphosed into bread. In a legend of Basse-Bretagne, Saint Peter steals a small two-sou loaf from some niggardly peasants and hides it under his cloak, and walks away from his companions to eat it. The Saviour interrupted him every instant by speaking to him, so that Saint Peter grumbled in his beard. Then the Saviour said to him, "Believe me, Peter, stolen bread is hard to eat and does not alleviate hunger."

Sell Or Hold?

To sell, or not to sell, which is the better? is the problem the farmer is endeavoring to solve at the present time. The hold-your-wheat policy met with such a terrible collapse the past season that the honest yeoman is beginning to lose faith in the men who are constantly preaching the future—that far-away future frequently—as the season of good prices. A carefully-prepared table giving the price obtained for grain at an Ontario point in October and March respectively, covering a period of nineteen years, shows that only on four occasions was the price higher in the spring. In two of these instances the advance was only two or three cents per bushel, figures that would not earn a profit to justify holding for this time. Taking the tabulated figures as a basis this is the conclusion reached: "On the average it pays better to market in the fall than in the spring. Without counting storage, cost of carrying wheat is fully one cent per bushel per month, and for six months would be six cents, viz.: shrinkage and insurance, three cents, interest three cents. Unless the wheat is extra good, the shrinkage will exceed the amount allowed. On the above basis fifteen out of nineteen years shows a loss in holding. The average loss for nineteen years would equal eight per cent. The average gain would be less than one and a half per cent.—an annual loss of six and a-half per cent for nineteen years." But this is only one view, and the old saw has it "there are two sides to every story." The London, Eng., correspondent of the Northwestern Miller supports an opposite view in this manner: "It is now quite certain that European importing countries will want at least 38,000,000 quarters and it is equally certain that the sources of supply outside the United States and Canada will not be able to provide more than 21,000,000 quarters, so that the United States will be called upon to supply 17,000,000 quarters for Europe alone, in addition to the 2,500,000 to 3,000,000 quarters (in wheat and flour) usually sent to South America, China, Brazil, etc. Thus 160,000,000 bushels of American wheat (or flour) are absolutely required, and yet, in spite of this, American farmers are pressing sellers, evidently at prices which cannot leave the growers any margin of profit. In my opinion, if ever wheat was worth holding it is at this moment of extraordinary cheapness."

Mixing Brains and Flour.

Everyone does not use their head to save their heels, not nearly as frequently as might be done. We rush at business in this age without thought sometimes whether the hot haste is going to do any good. In a word, we are not half careful enough. We are not sure we're right before we go ahead. A writer in our Kansas City contemporary, the Modern Miller, chats of this matter, and applies the moral to the mill operator in this manner: "Men who would do well, as the world measures it to-day, must be active, but rather of the intellect than physical exertion. We have machinery to do our running for us, and it is our business to run that machinery rather than ourselves. The time when manual labor was the lever which moved the industrial world will not come again, for mechanism has more than filled its place. And it is because the changes in the century have been so radical that men must understand them well to obtain due benefit therefrom. Passing from a general consideration let us consider how many flour millers spend more time fretting and exerting themselves uselessly than they do at operating the machinery as should be done to achieve success and recompense. Whenever you find a mill operator who is unduly impetuous or unpardonably neglectful, and on either account his machinery does not perform the service possible to obtain from it under intelligent direction, you have found a character typical of modern failure in this business of flour making. Another may not succeed from lack of knowledge of his trade, and others from different causes, but the majority who go down do so because they exercise their legs and arms more than their brain."

Modern Yet Ancient.

What is new is not always new. The evolutionists will find many illustrations to sustain their end of the argument in science and mechanics as well as where they contend they can be found—in nature. Modern inventions are often only the outgrowth of a former practice, and one that may be quite antiquated. Our English contemporary, Milling, has this opinion of modern methods of milling. "Automatic milling," it says, "so far as labor-saving goes, for we do not include the roller systems, is looked upon as quite of modern date. It may be news to many millers that devices familiar to us in conveying, elevating and the like were in vogue more than a hundred years ago, though not in England or even in Europe. The name of Oliver Evans is familiar to all American millers who know anything of the history of their craft, and it may not be unprofitable to set down here the means adopted by him for the furtherance of his trade. Before us as we write lies an old engraving of a mill designed by him, and rude though its execution is, the methods familiar in good mills to-day are herein represented. An adjustable elevator projects from the outer wall into the hold of a vessel alongside. The grain thus lifted passes into a worm at the top of the building and is thence conveyed to storage bins ready for manufacture into flour. Similarly on the land side a farmer's man is discharging grain through the wall of the mill into an elevator inside. Here is seen a feature of still more interest, for on its way to the inside elevator the grain passes through an automatic weigher, while other processes indicated are not without their parallels at the present day. Here is his own description: "By means of these machines may be performed every necessary movement of the grain and meal from one part of the mill to another, through all the various operations from the time the grain is first emptied from the waggoner's bag, or from the measure on board ship, until it be completely manufactured into flour, and separated ready for packing into barrels. All which is performed by force of water, without the aid of manual labor, except to set different machines in motion. This lessens the labor and expense of attendance of flour mills fully one-half."

MY MILLING EXPERIENCE.

BY BILL NYE.

JUST what that experience has been Bill Nye tells as follows in the Northwestern Miller:—

I think I was about eighteen years of age when I decided that I would be a miller, with flour on my clothes and a salary of $200 per month. This was not the first thing that I had decided to be and afterward changed my mind about.

I engaged to learn my profession of a man called Sam Newton, I believe, at least I will call him that for the sake of argument. My business was to weigh wheat, deduct as much as possible on account of cockle, pigeon grass and wild buckwheat, and to chisel the honest farmer out of all he would stand. This was the programme with Mr. Newton, but I am happy to say that it met with its reward, and the sheriff afterward operated the mill.

On stormy days I did the bookkeeping, with a scoop shovel behind my ear, in a pile of middlings on the fifth floor. Gradually I drifted into doing a good deal of this kind of brain work. I would chop the ice out of the turbine wheel at five o'clock a.m., and then frolic up six flights of stairs and shovel shorts till nine o'clock p.m.

By shovelling bran and other vegetables sixteen hours a day, a general knowledge of the milling business may be obtained. I used to scoop middlings till I could see stars, and then I would look out at the landscape and ponder. I got so that I piled up more ponder, after a while, than I did middlings.

One day the proprietor came upstairs and discovered me in a brown study, whereupon he cursed me in a subdued Presbyterian way, abbreviated my salary from $26 per month to $18 and reduced me to the ranks.

Afterward I got together enough desultory information so that I could superintend the feed stone. The feed stone is used to grind hen feed and other luxuries. One day I noticed an odor that reminded me of a hot overshoe trying to smother a glue factory at the close of a tropical day. I spoke to the chief floor-walker of the mill about it and he said "dod gammit" or something that sounded like that, in a coarse and brutal manner. He then kicked my person in a rude and hurried tone of voice, and told me that the feed stone was burning up.

He was a very fierce man, with a violent and ungovernable temper, and finding that I was only increasing his brutal fury, I afterward resigned my position. I talked it over with the proprietor and both agreed that it would be best. He agreed to it before I did, and rather hurried up my determination to go.

I rather hated to go so soon, but he made it an object for me to go, and I went.

I started in with the idea that I would begin at the bottom of the ladder, as it were, and gradually climb to the bran bin by my own exertions, hoping by honesty, industry, and carrying two bushels of wheat up nine flights of stairs, to become a wealthy man, with cornmeal in my hair and cracked wheat in my coat pocket, but I did not seem to accomplish it.

Instead of having ink on my fingers and a chastened look of woe on my clear cut Grecian features, I might have poured No. 1 hard wheat and buckwheat flour out of my long taper ears every night if I had stuck to the profession. Still, as I say, it was for another man's best good that I resigned. The head miller had no control over himself and the proprietor had rather set his heart on my resignation, so it was better that way.

Still I like to roll round in the bran pile and monkey in the cracked wheat. I love also to go out in the kitchen and put cornmeal down the back of the cook's neck while my wife is working a purple silk Kensington dog, with navy blue mane and tail, on a Gothic lambrequin.

I can never cease to hanker for the rumble and grumble of the busy mill, and the solemn murmur of the millstones and the machinery are music to me. More so than the solemn murmur of the proprietor used to be when he came in at an inopportune moment, and in that impromptu and extemporaneous manner of his, and found me admiring the wild and beautiful scenery. He may have been a good miller, but he had no love for the beautiful. Perhaps that is why he was always so cold and cruel toward me. My slender, willow grace and mellow, bird-like voice never seemed to melt his stony heart.

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

MANITOBA AND NORTHWEST MATTERS.

ON another page we publish the first of a batch of "Observations" by a prominent Ontario miller who has recently visited Manitoba and the Northwest and spent some time among the people of that country. Besides knowing how to mill good straight roller our correspondent wields a facile pen, and if readers of the CANADIAN MILLER do not agree with everything he may write—which is not asked—they will grant that the observations are not wanting in suggestiveness, touching several topics in which eastern and western millers and grain men have a very vital interest.

NEW GRAIN STANDARDS.

AT the time we closed our forms for the September CANADIAN MILLER the Government had just named, on recommendation of the Minister of Inland Revenue, the two boards whose duty it is to fix the grain standards for the year. The interests of the millers, as had been promised, received proper recognition in the appointment of prominent millers on both boards. The eastern board, who pronounce on grain grown east of Port Arthur, consists of Messrs. W. D. Matthews (chairman), G. A. Chapman, F. Flynn and M. McLaughlin, Toronto; W. W. Ogilvie, D. G. McBean, R. M. Esdaile and A. G. Thompson, Montreal; T. O. Kemp and E. A. Adamson, inspectors. The gentlemen composing the western board, dealing with grain grown west of Toronto, is constituted as follows: N. Bawlf, (chairman), S. A. McGaw, S. Spink, K. Campbell, Brandon; H. S. Patterson, Portage la Prairie; C. Braithwaite, D. D. Sibbald, Regina; H. N. Baird, M. McLaughlin, R. M. Esdaile, J. E. Menson, Moosomin, and inspectors Gibbs and Horn.

Both boards have within the past few weeks met and completed their work. Mr. W. D. Matthews says of the samples that came under the inspection of the eastern board, which met in Toronto, that "they are as a rule lighter in weight when compared with those of last year, but the wheat is of brighter quality. Barley is stained to a considerable degree, and the quantity of high grade will be small in consequence." Early oats are of good color and weight, but late oats are more or less stained. Peas and rye are fully up to the average. Taken altogether the changes from last year's standards are not particularly marked. The meeting of the western Board was held in Winnipeg on the 7th inst. A large number of samples were sent in, almost every district being represented. Much care and time was given to the work before a final decision was reached. No. 1 hard is said to rank much higher than the same grade of grain last year, and is a clean sample with plump, hard and well-colored berry. No. 2 hard is also a fine sample, so good, some members of the board say, that there was not two cents a bushel between it and No. 1. Wheat that was known last year as regular will this year be classed as "frosted" and there will be a new grade termed "smutty." The standards this year will be high.

A QUESTION OF QUOTATIONS.

RATHER better than three months ago, July 7, a disagreement arose between Mr. J. F. McLaughlin, commission merchant, and Mr. J. L. Spink, miller, regarding a report furnished the daily press by Mr. Spink, quoting straight roller flour at $3.75. Mr. McLaughlin contended that the figure was considerably wide of the real value, and to settle the trouble he moved on 'Change that a by-law be framed compelling dealers to furnish correct reports to the press. Instead of considering the resolution the Board of Trade appointed a special committee of three members, outside of the milling business, to investigate the matter, examine Mr. Spink's books and vouchers, and report. Their finding was confirmatory of Mr. Spink's contention that his statement was based on an actual sale of straight roller made on or about July 7.

Mr. McLaughlin was not satisfied with this decision, and immediately resigning his position as a member of the Toronto Board of Trade, he commenced legal proceedings against the Board. The result of this action is shown in the following letter from Mr. E. A. Wills, secretary, written on Oct. 3 at the instance of the president of the Board. The secretary says:

"1. The president has been advised by the legal advisers of the Board of Trade that under the by-laws of the board he had no authority to order the investigation which took place or to name a committee to investigate the matter as applied for by J. L. Spink; but following the precedents of his office he thought it was his duty to appoint the committee in question, which he did without any hostile feeling towards you, and he has been further advised that the investigation referred to could not be considered as, and was not, a finding within the rules and regulations of such board.

"2. You had no notice of the appointment of the committee or holding of the investigation, and were not present at it, and had no opportunity of presenting your views of the matter or any evidence on which you might have relied.

"3. As the correspondence might very reasonably have produced the impression that the investigation had been regularly carried on under the authority of the by-laws of the Board of Trade, this letter is written.

"4. I must say, however, the committee which investigated the question did so with the honest desire of ascertaining the truth and without the slightest intention of injuring you, and I am desired to express regret if any injury has been done."

The letter is a distinct acknowledgment by the Board that their action was indefensible, and in this respect must be satisfactory to Mr. McLaughlin.

The point in dispute, however, between Mr. McLaughlin and Mr. Spink, is not settled by the letter of Mr. Wills. It remains, in fact, no nearer a solution than before the special committee of the Board took the matter up, and we suppose will remain unaltered unless Mr. Spink now moves to secure another investigation by a committee of arbitration, who should, it seems to us, be instructed to examine both contestants in the case.

We have no doubt that the daily press exercise all reasonable care in securing reports of current market prices. Were this not the case we can readily see that no small amount of trouble would be almost certain to ensue. In the case in dispute we understood that Mr. McLaughlin was brought to book by a miller from whom he had bought straight roller flour about the same time as the report of Mr. Spink's appeared in print, but only paid for the same $3.50. The customer naturally entertained the impression, until explanations were made, that he was not being squarely dealt with by Mr. McLaughlin. Under similar conditions any dealer might suffer in like manner.

The fact that even one case of the kind has occurred makes it desirable, in the interests of the milling trade as a whole, and for the behoof of both Mr. Spink and Mr. McLaughlin, that the bottom facts should be reached in this particular case.

AGAINST THE MILLER.

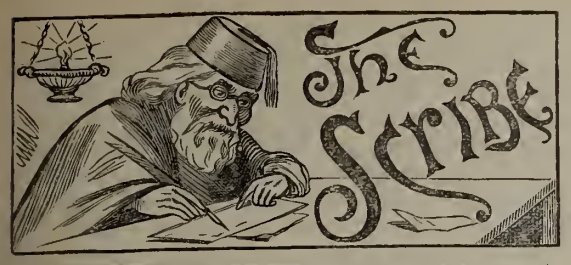
JUDGMENT has recently been given in a case tried at Orangeville that possesses peculiar interest to millers. Justice MacMahon presided, and the action was taken by one Nathan Clark, a farmer residing in Caledon, against Joseph McLennan, a grist miller of the same place, to recover $251.25 damages for the wrongful conversion of 198 bushels and 55 lbs. of spring wheat at 85 cents a bushel, and 91 bushels and 50 lbs. of fall wheat at 90 cents a bushel. The defendant denied the conversion and alleged that the wheat was stored with him by the plaintiff to be held by him at the risk of the plaintiff without reward to the defendant, and that the wheat was without the fault of the defendant destroyed by fire whilst so in store. The receipt given by the defendant to the plaintiff reads thus:—"Received on store at owner's risk 198 bushels, etc., to receive current market price when called for his money." In South Australian Co. v. Randall, L.R. 3 P.C. 104, it was held that where corn was deposited by farmers with a miller to be stored and used as part of the current consumable stock of the miller's trade, and was by him mixed with other corn deposited for the like purpose, subject to the right of the farmers to claim at any time an equal quantity of corn of the like quality without reference to any specific bulk from which to be taken, or in lieu thereof the market price of an equal quantity on the day on which he should make his demand, such transaction amounted to a sale and was not a bailment of the corn. MacMahon J. points out that the distinction between that case and the present is that the plaintiff's wheat was received in store at his risk, and holds that the transaction here was a bailment and not a sale, referring to Benjamin on Sales (Bennett's Am. ed., 1888); Nelson v. Brown, 53 Iowa 555; Ledyard v. Hibbard, 48 Mich. 421 (per Cooley J.); and that sufficient grain having been reserved to represent the quantity stored by the plaintiff, it was there at his risk, and having been destroyed by fire prior to any sale thereof so the defendant, the plaintiff is not entitled to recover. Judgment dismissing the action with costs.

EDITORIAL NOTES.

IT is announced that an important meeting of delegates from Canadian Boards of Trade and the railway companies is to be held in New York shortly in order to arrive at some decision in regard to the question of inspection of Canadian grain sent to New York for export to England. The railway companies want, if possible, all the Canadian grain coming into New York to be graded and the different grades bulked in a warehouse. They do not wish to have each separate lot identified as heretofore, as this results in delay and detention of cars. There are a good many difficulties in the way of this scheme, and it is to try and reconcile these that the meeting in New York is to be held.

A PROJECT is under way for the erection of a big flouring mill at Toronto Junction. At least this municipality is very anxious to receive the expected plum. The mill will be of 600 barrel capacity per day, and will include a large elevator, cooper's shop, power house, etc. About $60,000 is to be expended on the building and plant. The bonus asked is a site, water at cost, and exemption from taxation for ten years. The Junction is anxious to secure the mill, as it would consume the larger part of the grain passing along Dundas street and the Weston road, and in this way settle a local agitation for the establishment of a market within the town. The mill, if erected, and of this there is not much doubt, whether it goes to the Junction or elsewhere, will be an important addition to the milling properties of the province. Archibald Campbell, M.P. for Kent, and until a few months ago of the firm of Campbell & Stevens, millers, Chatham, Ont., is, we understand, the prime mover in the project.

THE dangers of the mill or factory are not alone in defective engines or careless management of those not defective by the employment of cheap and incapable labor. A contemporary having reference specially to the mills and shops of the United States says there is not a mill or shop in that country that does not contain some death trap which needs boxing up. "Steam engines are bad enough, but they are harmless compared with set screws projecting from collars, bolts from couplings, or belts running unprotected upon pulleys in or near passage ways. The law orders these things to be protected. They are safe enough; it is the people that want protection, and the machinery is free trade in this respect. It is a pretty sure thing that if a man gets killed in a factory the owner thereof has to pay for it, but it does not seem to make owners any more careful to weed out and cover up the danger holes in our shops and factories. How many establishments are there in the United States where the above would not find application somewhere?" How is it in Canada?



MR. GEO. RIDOUT, of Dick, Ridout & Co., who returned a fortnight ago from a trip through southern Manitoba, says he found the grain coming along in good condition. He did not think the crop would be as heavy as last year, but it would be of an improved quality, and would be handled much more successfully than the crop of a year ago. "I saw large quantities of last year's crop," said Mr. Ridout, "standing in the stack and practically valueless. The farmers were undoubtedly quite unprepared to handle the crop of the past season, and made mistakes which, however I judge, they are not likely to repeat this year. There is no large amount of milling done in the province outside of the two big milling concerns of the Ogilvies and the Lake of the Woods Milling Co. Still, at Brandon, Souris and some other points some very successful mills are being operated."

* * * *

The commercial policy of nearly every nation of late years has been one reaching out to new fields and pastures green. The future of Canada depends in a large measure on her success in finding an enlarged market for her natural products. For our grain as grain and grain as flour this condition is vital to the prosperity of the country in the broader sense, and the farmer, grain merchant and miller individually. The flour market in Great Britain is in that shape that no profitable trade can be expected from that field just now. We have a trade with Newfoundland and the West Indies that under favorable conditions we may expect to become enlarged. Mr. E. A. C. Pew, a gentleman interested in Canadian export trade, looks to Mexico as a field where a profitable trade can be done in Canadian manufactured goods and machinery, and none the less so in our wheat and flour. He intimates that he recently had an interview with Mr. Foster, Minister of Finance, and pointed out to him that the Mexican government was willing to accept these products of ours free in return for our admission of raw sugar, raw cotton, tobacco, hemp and other commodities they grow and ship generally in a raw state. "Mr. Foster," he says, "proposes to subsidize a line of steamers between Mexico and Canada if the Mexican Government will give a like sum to the project, and take further steps to promote trade between the two countries. Such a line of steamers could ply all the year round between Mexican ports and Halifax."

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"I visited over seven hundred farms while in Manitoba during the past three months," said Mr. John Brown, of the Citizens' Milling Co., who returned to the city within the month. "The farmers of this province are an exceedingly intelligent class of men, and the progress that has been made in a few years in general farming, particularly in the raising of stock, is very noticeable. You ask about crops. The grain in different localities varies. One place it can be pronounced good; another decidedly poor. On some parts of the Pembina branch of the C.P.R. I found some of it short and light through want of rain. In the southern part of the province the crops are somewhat better, but in some cases slightly damaged by frost or hail. In the locality of Melita, Deloraine and Napinka crops are very fine. Along the south-west branch of the C.P.R. they are very light and it is questionable what the grain will grade. Oats in this division were very short and thin in the head, and it is anticipated that there will not be any more than is required for home consumption. Barley was fairly good, bright in sample, although it will not weigh very heavy. One trouble about the barley of this district which would prevent it being marketed is that although it is the first cut it is the last kind of grain to be stacked, and is, therefore, subjected to the sunshine and rain, resulting in the utter destruction of its color. The alleged reason of this is that dark barley brings as good a price as light on the market of Manitoba. There is no doubt in my mind but that if properly saved the barley grown in this district would produce a malt equal to the best known in Ontario. I observed on the main line of the C.P.R. that wheat was being threshed from the stock. In the opinion of grain men this is a bad practice, the sample not being as good as if it were put into stacks and cured. The crops as a whole will not be as large as I fancy many people suppose."

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The elevator companies of Minneapolis have decided to keep their business to themselves, and will hereafter withhold reports of stocks of grain on hand from Bradstreet's and other commercial periodicals. The reply of the manager of one of the largest elevator companies in Minneapolis to a mercantile agency is significant. He said: "The furnishing of stocks of wheat in this country by your concern and also by the Government reports is absolutely detrimental to the agricultural interests of the country, and we have deemed it best to withhold this information. We believe this system is in a great measure responsible for the terrible depression of our market and detrimental to our agricultural interests. It is the only line of business that I know of where people who have goods to sell practically depreciate the same, saying to their buyers 'hold off and you can get our property cheaper than you can if you buy now.'" That a boycott effort of this nature will accomplish the end aimed at is very doubtful. If the elevator companies refuse the information it will only be necessary to secure it in some other way. And I fancy the press will find the way. In this day news cannot be suppressed, and whilst the liberty of the press is perhaps at times abused, a remedy of these abuses is not to be secured by methods of repression. One milling journal, I notice, reads Bradstreet's a lesson, charging that it "never has made judicious use of the information sent it by the grain producers and dealers."

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Few men are better known to the millers of Ontario than Mr. Edward Peplow, ex-President of the Dominion Millers' Association, and late of the milling firm of Hilliard & Peplow, Peterboro. His admirable address before the association in August was evidence of the careful thought that for years he had given to milling affairs, and it was with regret that the association learned that he would not be able to place his services at the disposal of the association in any capacity during the new year. He has since that date removed to Manitoba to become manager of the large flour and grain business of Geo. McCulloch & Co., Rapid City, Man., and whose head office is at Souris. Writing to the CANADIAN MILLER, under date of Sept. 17, Mr. Peplow says of conditions in Manitoba: "The wheat is all cut and farmers are busy stocking and some are threshing. It would be very much better for the quality if there were no threshing done until the sweating process in the stock was completed, as I have seen wheat loaded that was altogether too raw." Mr. Peplow has been joined in his new home by Mrs. Peplow and Miss Peplow, who left a week ago for Rapid City. With the local press in Peterboro we can say: "Mr. Peplow's many warm friends here will wish him success in the west and the community will regret the departure of a good citizen." I do not need to say that readers of the CANADIAN MILLER will look for some word from their old friend in these columns from time to time, and they are not likely to be disappointed.

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A few months back I reported several stories of millers refusing to have work on their mills commenced on Friday, because Friday is an unlucky day, so sailors, and negroes, and Highlandmen have said. Just as Friday is associated in the minds of those who are superstitious with bad luck, so good luck is frequently connected with the presence of a black cat. There are millers who have faith in the black cat. The story has lately been told of the proprietor and head miller, of a mill in the state of Missouri, who one day were sitting in the office of the mill, when in walked a family of five cats that were sable as a nigger of a dark night, with a dark lantern, looking in a dark cellar for a bucket of tar that wasn't there. "Look there!" said the head miller, "good luck is coming to us soon." "Hush," said the proprietor, "your superstition makes me weary." "That's all right," was the response, "but you just await results." In less time that it takes to tell it a telegraph messenger boy bobbed in and handed the proprietor a telegram, which was an order for a carload of flour. "Cat No. 1," said the head miller. Only a few minutes elapsed before the messenger boy was back again with a telegram for another carload of flour. "Cat No. 2," said the head miller. The telegrams continued to arrive until five carloads of flour were ordered—the exact number of cats that came into the office. "What do you think of the cat superstition now?" asked the head miller of the proprietor. "Blamed if there isn't something in it," said the mill owner, with a smile.

* * * *

The Winnipeg Commercial took occasion some time ago to say that eastern millers never report any overweight in cars of wheat, but always claim allowance for shortages. This broad charge has been met by a letter from Mr. J. L. Spink, of this city, who says:—"This is a very serious stricture, it seems to me, to apply in general terms against the millers in Ontario and Quebec. I would very much regret to learn that this was generally true as applied to millers in Ontario and Quebec. If true, even in regard to any considerable number of millers, it indicates a feature in the trade that must result in injury, and in the end loss to the innocent millers as well as the guilty. Where the distance is so great requiring transportation over 1,400 miles there would be no safety to the eastern millers in buying Manitoba grain if out turn of cars were not guaranteed. On the other hand every miller should value this concession made in their interest by the Manitoba shippers and adopt the most exacting rules and regulations to avoid waste, errors or mistakes in the unloading of cars, and promptly report out turn of all cars and pay for all overweight. The Manitoba shipper, in guaranteeing the out turn of cars, places the miller (in many cases a man unknown to him and an entire stranger to him) in a position of trust as his agent to honestly and faithfully weigh out the contents of cars, and promptly report the out turn as he finds it. I feel assured there are a very large number of millers who promptly report out turn of all cars and gladly pay for all overweight. I trust, therefore, you do not intend to make the charge of dishonesty apply to all millers. I am, however, free to confess that if the Winnipeg dealers and shippers find any miller or millers receiving any considerable number of cars and have none reported as overweight they have valid ground for complaint. At my own mill it is a standing rule to report the exact turn out of every car at the office as soon as unloaded. If turn out has not varied over one bushel under or over the weight invoiced I make no claim for shortage and pay no overweight, accepting car correct as invoiced to me by shipper. But on every car unloaded where shortage is more than one bushel, I claim the whole shortage, and on every car unloaded where overweight is more than one bushel I pay for the whole overweight. Working under this rule for more than twenty years, I have found by experience that about 40 per cent. of cars weigh out correct as invoiced, about 45 per cent. are more or less short, and about 15 per cent. are more or less overweight. Some years the overweight nearly equals the total shortage. I might say there is no cartage at my mill, the grain is elevated out of cars direct over scales and weighed off in about 85-bushel draughts. Taking the past year Sept. 1st, 1891, to date, I find total number of cars received from various points in Ontario and Manitoba and unloaded at my mill was 260 cars. The record stands on this lot as follows: 105 cars weighed out as invoiced to me; 109 cars were short a total of 758; 46 cars were overweight a total of 367 bushels. I claimed this shortage from the shippers and paid this overweight to the shippers. The four cars showing the greatest shortage was 58 bushels, 56 bushels, 54 bushels, 37 bushels. The four cars showing the greatest overweight was 70 bushels, 49 bushels, 20 bushels, 18 bushels. I should say, in closing, that I have found where cars are short or overweight coming from Manitoba and the Northwest, the quantity of grain short or overweight is usually very much more than on cars from Ontario points, indicating less care in loading or possibly not as good facilities for correctly weighing the grain."

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

ANOTHER EFFORT TO REMEDY THE EVIL.

WHAT has been done by the Millers' Tracing Bureau, of the United States, to remedy the evils of delayed shipments at the seaboard has been referred to at various times in these columns. No small amount of good has been accomplished, yet the trouble is far from being altogether removed. A new effort, with the same purpose in view, is just now being launched by Mr. J. M. Langley, under the name of the Seaboard Freight Clearing House. The main office is at New York, and agencies have been established, we are told, in Montreal, Boston, Philadelphia, Baltimore and Newport News. The company is said to be in the hands of men who are competent to carry out what they undertake, and as a contemporary remarks, so say we: "Anything which will secure prompter delivery of foreign-bound flour, and which presents a reasonable prospect of succeeding in its attempt, has our most cordial approval."

MANITOBA AND THE DEEP WATERWAY.

Smith Curtis, a leading Manitobian, who took part in the reciprocity congress, held at Grand Forks, N.D., lately, expressed himself as follows regarding the waterways of the two countries: "If we had a waterway from Duluth and Port Arthur of a depth of twenty-one feet, would it pay to cut it through to twenty-one feet to Montreal? By rail it now costs twenty-seven cents per bushel to get wheat from Winnipeg to Montreal. From Montreal to Liverpool it costs six cents to eight cents. All the year round the average cost of shipments from Winnipeg to Liverpool is probably thirty cents per bushel. If these waterways were deepened so that ships could come from Liverpool to Fort William and Duluth, we could ship wheat from Winnipeg to Liverpool for probably not more than eighteen cents, clear of all charges. That means a saving of twelve cents per bushel. It means $3,000,000 saved to the people of Manitoba on this year's wheat crop alone. We get most of our goods from England and the east, and on these another saving of similar amount would be made." The St. Lawrence could be deepened, he thought, for $200,000,000. The money could be had at four per cent., and the saving to Manitoba would nearly pay that interest.

Mr. Fisher, another Manitobian, had this to say on the same subject: "Nature has given us the most magnificent inland water system in the world. This waterway, situated on the boundary, is common property and should be improved at joint expense where obstructions can be most readily obviated by diverting the natural stream into canals. These canals should be constructed by both nations jointly, even though they are situated in the territory of one or the other. By treaty the entire extent of the St. Lawrence river should be forever made free to navigation by the United States as well as Canada. This convention should open the way to secure the observance and advantage of treaties to both nations. These canals should not be called Canadian canals. United States tonnage through the Welland canal is greater than that of Canada. Canal tolls should be swept away, canals being in the charge of a joint international canal commission. This view advanced by Canadians is no disloyalty to Canada. Cheaper freights will result. Ocean vessels coming through deepened channels direct to lake ports will give an immense impetus to the commerce. The northwestern grain markets should be able to ship wheat in their own vessels direct to any ocean port in the world."

THE SCOT'S OATMEAL.

BY F. RIDDELL, IN "MILLING."

The discussion so constantly going on in the columns of the press as to the food properties of oatmeal is calculated to give "a gey sair shough" to the "canny Scot" who religiously believes that he owes the stalwart frame and robust health which he commonly enjoys in a great degree, to his bringing up on the now seemingly despised product. To hear it now derided as indigestible and of no account generally, after having in his earlier years depended on it for "baith meat and drink" and afterward reading and hearing all the food reformers of the country recommend it as almost the ideal food, is apt to make him turn in some strong quotation from the Bible—or Bobby Burns—as to the changeableness of popular favor. But sooth to say the almost universal use of the "halesome parritch, chief o' Scotia's fare" was probably far less the result of any fine spun theories as to "nitrogenous" and "non-nitrogenous" elements or any other high-flown expressions or notions of the modern food reformers, than it was of the necessity at a time when the landward peasantry had to depend on the products of the surrounding field of using for food what these fields would produce, and this is the case of the greater part of the land of Scotland, being oats, barley, peas or beans.

If it be admitted, as some theorists would fain have us do, that the food which is the most readily produced in a country, or which comes there to its greatest perfection, is the one above all others fitted for the use of its inhabitants, and the one which will to the utmost favor their development, then we can easily believe that for a resident of Scotland the grain of the oat is by nature designed for his food, as there is more of that grain raised there than all of the other cereals put together, and of a quality that is unsurpassed in weight per bushel, in thinness of the skin, or hull, or in the yield per acre.

As is true of all lands where one product of the soil becomes the staple food of the people, great attention has been paid to securing varieties most suited to the varying conditions under which they have to be grown, and so some kinds like the "Potato" and "Berlin" are found among those best adapted to cultivation on the rich "catses" or valleys of the midlands and south, while others as the "Tartarian" and "Poland" are better adapted to the higher and poorer lands there and further north, while still other and smaller varieties form the staple crops in the small farms of the croftus in the highlands and the islands.

But whatever the variety, or wherever raised, the oat, as the main bread crop of the country, receives great attention from the farmers, the soil is prepared with care, the seed selected and well cleaned, sown broadcast and harrowed thoroughly, and if the prospects seem to be for dry weather the land is pressed down with a heavy roller. Should weeds make their appearance, like

> The big bull thistle, spreading wide
> Amang the bearded bear.

Boys and women are set at the task of cutting them out, under the direction of a grieve or foreman, and at this task the youthful Burns declares he showed his patriotism by

> Turning my weeding hook aside
> To spare the emblem dear.

In a country where the range of its cultivation is so wide, and the variations in size of holdings so great, the time and methods of harvesting necessarily follow the same law, and the crop is consequently reaped in all the methods which have ever obtained among the people during the 1,500 years of their agricultural history, from the sickle which in ancient times may have been improvised from the claymore or dirk or "skean dhu" of the Highland freebooter, down to the complicated "Bell" or "McCormack" of modern and wonderful fame.

But however cut, the precious grain is bound and "stooked" with much care, the stooks being "hooded" to prevent the wetting of the heart of the bundles by the frequent showers while curing in the rapidly shortening autumn days of a high northern latitude, which being at last accomplished (sometimes as late as "Hallowmass"—Nov. 1—even in the southern counties) the crop is carted to the stackyard where it is carefully stacked "and a' made snug, wi thak and raip," to stand until the straw is required for the use of the "nowt" when it is carted or carried into the barn and threshed for use.

In the threshing, as in the reaping, "all stages of the art" from the "rod" or flail, which in the prophet's day "beat out" the grain of the holy land, to the steam thresher, either fixed or portable, of our own time, many of which now not only thresh and clean the grain, like their American prototypes, but separate the lighter grain from the heavier, deliver the chaff apart from the straw, and by the use of the ingenious American Applebee's self-binder, tie the straw in bundles to be stowed away! The straw, in fact, in that country plays no unimportant place in the farm economy, for in a country the fertile acres of which are so restricted and consequently so thickly populated that the highest kind of "high farming" is necessary to keep up the fertility of the soil to its highest point to enable the tenant to make a living for himself and family, besides paying to the "laird" almost as much for rent each year as would purchase equally good land on this side of the Atlantic.

In times not very long ago, on the smaller farms, one man was kept employed all winter in keeping up the supply of threshed straw for the cattle, commencing before daylight and working till long after dark of the short winter day (the latitude of Cape Farewell in Greenland just misses the north end of the island) aided during the morning and evening hours of darkness by the plowman, who during the day follows his team of two, three or four horses afield turning over the stubborn glebe, mayhap meantime "crooning over" Plowman's Rob's "Address to a mouse on turning over her nest with the plow."

The lengthened time given for curing in shock and stack, is considered to have much to do with the quality of the oats, as they slowly dry and the straw goes through its sweating process the berries fill their chaffy coverings almost to bursting and come out on threshing glistening plump and heavy, forty-four to fifty pounds per bushel being quite common weight. The legal weight is forty-two pounds.

While much of the routine of the Scottish husbandry is merely of interest as the lingering of bygone customs, the care taken of grain in regard to giving it a long time of seasoning before threshing it from the straw, will have the hearty approval of every miller who finds it so hard to store or grind satisfactorily the stuff our go-ahead American farmers are so anxious to thresh and haul to market before the straw is really dry enough to stack, and in consequence the buyer often finds himself with a white elephant on his hands in the shape of a steaming mass of damp grain, which, however successfully dried, never regains the value lost by undue haste at a critical time.

After the day's threshing with the flail the heap of "corn and chaff" is subjected in the evening to the action of the "farmers," and after being properly "dighted," the chaff, if not used for beds, being fed to the stock, sometimes steeped for "tea" for some of the animals, or mixed with cut or pulped turnips.

The "corn" being safely stored in the "cornhouse," we will leave it for the present, hoping soon to take up the story again and see how it is made ready for use as parritch, or cakes, or bannock, or brose, not forgetting the famous brand of Athole, which is fit for the palate of even a Highland laird, being composed of the best Scotch whisky and oatmeal! A grand combination surely.

THE FLOUR MARKET.

Trade in flour is largely on the dull side. English markets are so thoroughly demoralized that there is no profitable business to be done across the water. Nor does home trade possess any remarkable activity. Prices are ruling low.

PRICES OF FLOUR AND MEALS.

The Bulletin of the Dominion Millers' Association quotes mill products as follows: Ontario: "Straight

grades at $3.30, $3.40 and $3.50, and patents at $3.50 and $3.60 per barrel, f.o.b., for lower provinces. Bran, $9.75, $10.75 and $11 per ton, f.o.b. Shorts $11.50 and $13 per ton, f.o.b. Montreal: Sales of patent at $3.70. Export: Sales reported for export of patents at equal to $3.45 in barrels, and straight grades $3.30, west; and straight grades $3.50, Toronto freights." A Montreal report says: Values are easy and favor buyers. Strong bakers' and straight rollers receive most attention from dealers, who purchase from hand to mouth for immediate wants only. Very little is doing on shipping account. We quote: Patent spring, $4.25 to $4.40; patent winter, $4.20 to $4.30; straight roller, $3.65 to $3.80; extra, $3.10 to $3.20; superfine, $2.80 to $3; fine, $2.50 to $2.60; strong bakers', $4 to $4.10. Receipts of oatmeal are moderate. Outside of requirements for local retail trade, which is fairly good, there is not much doing. Prices range as follows: Granulated, bbls., $4.10 to $4.20; rolled, bbls., $4.10 to $4.20; standard, bbls., $3.90 to $4; granulated, in bags, $2 to $2.10; rolled, in bags, $2 to $2.10; standard, in bags, $1.90 to $2. Bran and shorts meet with fair local demand at quotations; moullie is quiet and nominal. We quote: Bran, per ton, $13 to $14; shorts, per ton, $14 to $15; moullie, per ton, $19 to $22.

THE FIELD WIDENING.

Cornmeal is taking an ever-widening hold on the people of European countries. In Servia, Bulgaria and Southern Hungary maize is grown to an extent that would be a surprise to the people of the newer world, who are prone to look upon this continent as the one great source for this grain. In Italy not alone have the people learned the value of cornmeal in its crudest sense, but they have acquired the art of making it into more than one deliciously palatable dish. In France and other European countries cornmeal is obtaining a popular foothold. Thus it is that new fields are cultivated for other bread-making products as well as flour.

FLOUR GRADING.

Flour, says the London Baker's Times, is graded principally on two points—viz., strength and color; the stronger and whiter a flour the greater its value. But what is understood by the strength of flour? It is the capacity to produce a well-risen loaf. In other words a strong flour is one which possesses a large quantity of gluten of good quality; a flour that is not strong is low in percentage of gluten.

Now it so happens that while gluten is scattered through the entire floury part of the grain, it is present in greatest quantity in the portion next the husk, the very part which is also richest in oil and mineral matter. The outer edge of the grain differs from the inner or central part in degree of darkness, so that it is not very difficult for the miller to separate the two portions, and obtain one flour compound principally of the outer part. and another which represents the inner floury portion.

In the process of milling the flour from the outer part of the grain becomes more or less contaminated with particles of bran, and is therefore darker in color than that from the interior.

From the roller mills usually three grades of flour are produced in about the following proportions: "Strong baker's," 54 per cent.; "patent," 40 per cent.; "low-grade," 6 per cent. The "strong baker's" is the flour from the exterior portion of the grain, containing a large proportion of gluten, somewhat dark in color on account of the presence of branny particles and also because of comparatively high percentage of oil matter. It is used principally by bakers for producing the ordinary brown loaf, its large amount of gluten allowing production of large loaves which may be baked without pans.

"Patent" is the flour from the inner portion of the grain, which contains less gluten than baker's, but is whiter in color. It is used for making finer qualities of bread and for family use; the strong baker's being too strong, forming a mass that offers too much resistance to the passage of gas to be suitable for fine pastry.

The "low-grade" is a very dark flour, containing very little gluten, but considerable quantities of bran and germ are present. It is not used to any extent in bread-making, but is used in manufacturing and as a food for cattle.

Office of the CANADIAN MILLER,
October 15, 1892.

THE GENERAL SURVEY.

CONTINUED low prices for wheat is the noteworthy feature of the month. How long this will continue is the question which no authority seems able to solve with satisfaction to everyone. It would appear that bottom had surely been touched and that an up movement might be expected shortly, but that this will be very marked is doubtful. Certain authorities entertain the opinion that not only will there be a stronger market in the near future, but this is sure enough to warrant a policy of holding wheat to escape the loss of present depressed prices. The argument is made to work at both ends (a) that European countries will need to look outside for a greater quantity of food products than was expected earlier in the season, (b) the crop on this side, it is claimed, is not going to yield as heavily as was supposed some months ago, and consequently there will be less wheat to supply an extra demand. It is further contended that present low prices are an outcome of the reaction from the mistakes made by many last year, and have no foundation in actual conditions and the possibilities of the future. Buyers are afraid to buy because they were burned last year. And accepting this hypothesis as correct time will prove a successful healer of what is believed to be only a temporary trouble.

How far it is wise to rest on this view is a matter for guarded consideration. There is no little force in the contentions stated, but it would be a mistake to let this view swing back again to the old and almost chronic evil afflicting many sellers of anticipating with every advance that is made a further advance until the turn comes in an opposite direction and losses, direct and indirect, are created.

So far as our own country is concerned, especially in Ontario, the quality of the wheat is of a character that must be gratifying to everyone. It is, in fact, too fine a wheat to bring so low a price as 65c. In Manitoba the yield will not be as large as last year, perhaps in Manitoba and the Northwest not greater than 20,000,000 bushels, but the higher quality will more than compensate for the reduction in yield.

The situation taken altogether calls for cool judgment, and the men who will strike a level-headed medium, being neither over-depressed by present conditions or too elated when a rise may come, are likely to close up the season without many of the regrets that were mixed up with the business of the past year.

WHEAT.

Quotations are as follows: Toronto: Fall, white and red, west, 66c. No. 1 hard, November, delivery at North Bay, 87½ to 88c.; No. 2, same point, 83 to 84c. Montreal: No. 2 hard, Manitoba, 81 to 82c.; No. 3, do., 71 to 73c. Chicago: October, 72⅝c.; December, 75⅜c.; May, 80¾ to 80⅞c. Duluth: No. 1 hard, 74¾c. for December; 81¼c. for May; No. 1 northern, 72½c. for December; 79c. for May. European markets: Beerbohm, October 11, says: Floating cargoes—Wheat, firmly held; corn, nil. Cargoes on passage—Wheat, less disposition to buy; corn firm, but not active. Mark Lane—Spot No. 2 Calcutta wheat, unchanged; present and following month, 3d. higher. London—No. 1 California, prompt sail, 3d. lower; nearly due, unchanged; red winter, prompt steamer, 3d. lower; present and following month, 3d. lower. French country markets, turn dearer. Liverpool—Spot wheat, slow at the advance; corn, quiet, steady; wheat, ½ to 1d. dearer. On passage to United Kingdom—Wheat 2,010,000 qrs.; corn, 404,000 qrs. To continent—Wheat, 905,000 qrs.; corn, 145,000 qrs. Imports to United Kingdom past week—Wheat, 279,000 qrs.; corn, 32,000 qrs; flour, 220,000 bbls.

BARLEY.

The barley crop this year will be very considerably restricted compared with the production prior to the advent of the McKinley Bill. The color will not be equal to last year, and the weight will probably run two pounds less to the measured bushel. It is not anticipated that the crop as a whole will be of a character to give a great deal of satisfaction to the English brewer, and consequently any anticipated business in this direction will be small. No. 1 has been sought outside of Toronto at 44c., and No. 2 at 42c. No. 3 rules about 33c. At Buffalo quotations are: State, 68 to 75c.; Michigan, 65 to 70c.; western, 50 to 72c. Milwaukee: best grades, 63c.; poorer grades, 38 to 57c. New York: Canada barley, malt, is quoted at 90 to 95c.

RYE.

The following statement concerning rye production is submitted by Beerbohm's London List: The rye crop in Russia, if the estimates put forward at the recent Vienna International market can be relied upon, is only good in Poland, West Central Russia and the Caucasus. Elsewhere it is more or less below an average, and there is, therefore, every reason to expect that the recent official estimate of 75,000,000 quarters for European Russia will not be exceeded. Under these circumstances the world's rye crop may be approximately estimated as follows, compared with the actual returns of two previous years, in thousands of quarters:—

	1892	1891	1890
European Russia	75,000	59,800	76,050
Poland	6,000	4,500	5,500
Germany	31,000	28,900	27,000
Austria	9,500	8,475	9,800
Hungary	6,000	5,000	6,900
France	8,500	7,875	9,200
Spain	2,000	2,000	2,180
Belgium	2,500	1,000	2,100
Holland	1,400	1,000	1,500
Roumania and Bulgaria	2,000	1,725	2,000
Denmark	2,250	2,300	2,040
Sweden	2,500	2,750	2,625
America	3,400	3,750	3,500
Canada (Ontario)	250	250	195
Total	152,300	129,325	150,590

It is added that under the supposition that the remaining countries, such as Turkey, Servia, etc., produce average crops, it will be seen that the production of rye this year promises to fully equal that of 1890, and to exceed that of last year's by 23,000,000 quarters, which is a sufficient reason why rye should return to its normal level compared with wheat. This exhibit indicates a total in bushels of 1,218,000,000 for 1892, 1,035,000,000 for 1891, and 1,205,000,000 for 1890.

Locally the demand for rye is steady, with price about 54c.

PEAS.

Ocean freights are on the rise, already 6d, with a further increase expected. This circumstance has had the effect of slightly depreciating current prices, which rule from 57 to 59c.

OATS.

A fair demand and prices steady. Offerings are light. Prices from 28½ to 30½c.

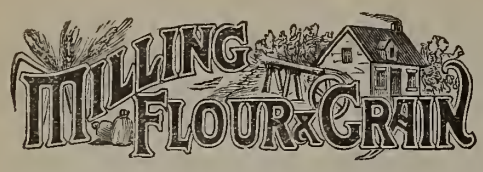
TRADE NOTES.

F. E. Dixon & Co., of Toronto, who have already supplied the Toronto Electric Light Co. with four large double belts. 36 to 38 inches wide, averaging each over 100 feet long, one of which has been in steady use for over seven years, have received another order from this company for two enormous leather belts for the addition to their works on the Esplanade.

One of the useful inventions of the present day is mineral wool, used for pipe and boiler covering, and wherever it is desired to prevent the radiation of heat, for deafening in floors, for filling partitions, for lining roofs, and for all purposes where protection from heat and cold are desirable. It is in use in Toronto in such places as E. & C. Gurney Co.'s iron works, Polson Iron Works, and other large manufacturers. The Canadian Mineral Wool Co., Toronto, who control this patent, have an advertisement elsewhere in the LUMBERMAN.

In a day when the temptation in advertising is often towards gross exaggeration, the advertiser who is able to make a strong statement, and at the same time speak absolutely by the book, has scored an important point. This would seem to be the position of the Magnolia Anti-Friction Metal Co. They claim that Magnolia Metal is the best metal that has ever been devised for high speed, and heavy engine, sawmill, and every class of mechanical bearings, and as a logical confirmation of this statement, they point to the enormous trade in this commodity since it was first put on the market in 1886. The record shows that the sales for the year 1891 were about 22½ times as great as the combined sales for 1886 and 1887; and the sales for 1892, from present indications, will exceed thirty times the business done during years 1886 and 1887. Magnolia ought under these circumstances to be deserving of a trial.

The Metallic Roofing Co., of Toronto, were very prominent exhibitors at the recent Industrial Exhibition. Their Eastlake metal shingles were everywhere, and wherever they were they were on top—on top of the Natural History Building, the gate entrances, Floral Hall, Press Bureau, ladies' retiring parlors, Grand Stand, new Dog House, about all the beautiful kiosks—everywhere. Wherever it was thought they would do the most good there they were, and certainly they did an immense amount of good during the fearful rainstorm on the 13th ult., in sheltering the immense crowds from being drenched. These shingles are in great demand for covering all sorts of buildings, particularly mills, factories, warehouses, depots, foundries, workshops, farm buildings—in fact, for covering any sort of a building that requires a good, weather proof roof. An advertisement of this concern will be found in our advertising columns and they will send particulars to any one writing them.



CANADA.

WAPILLA, Assa., is to have a roller mill.

CARBERRY, Man., boasts of thirteen grain buyers.

MCBEAN'S elevator, Virden, Man., was destroyed by fire on the 29th ult.

ROGERS & Co. are operating the flour mill at Carberry, Man., which has recently been remodelled.

THE local press report a good many cases of farmers barns and contents being burned from sparks from steam threshers.

NEW elevators are to be built at Hamiota and Oak River, on Northwestern Central Railway, by Parish & Lindsay, of Brandon.

JOSEPH HILBURN, Blair, Ont.: "I do not want to miss a single number of your valuable paper—the CANADIAN MILLER."

FARMERS at Stonewall, Man., who stacked their oats before quite ready have been obliged to take them down again as they began to heat.

THE farmers of Alexander, Man., are incorporating for the purpose of erecting an elevator. They may also embark in the milling business.

AN elevator is being projected for Prince Albert, N.W.T., by Alex. Gordon. It will likely be the first elevator to be erected in the Saskatchewan district.

NELSON COLLINS, an employee in the Albina flour mills, Portland, N.B., was killed by an approaching electric car while endeavoring to cross the street.

ABOUT 3,000 bushels of wheat were delivered at the roller mill, Tilsonburg, Ont., a fortnight ago, being the largest delivery in one day in the history of the mill.

THE new milling company being organized at Boissevan, Man., is to be known as the Patrons' Elevator, Milling and Supply. The elevator, it is said, will be built at once.

THE total shipments of all grain from Montreal up to Oct. 1 this year are 13,776,798 bushels against 8,343,267 bushels for the same time last year, an increase of 4,423,531 bushels.

THE roller mill at Port Elgin, Ont., has been sold by the corporation to Mr. George Smith, of Wiarton, for $3,700. Mr. Smith is an enterprising young man and a good practical miller.

THE receipts of wheat from farmers for September at the mills of the Wolverton Milling Co., Wolverton, Ont., were 30,000 bushels, being double the quantity usually taken during that month.

THE deliveries of grain at Carman, Man., are running from 8,000 to 12,000 bushels daily. The bulk of it is grading No. 2 hard. The elevators are handling the grain without any visible trouble, and the C.P.R. is filling the demand for cars regularly.

MR. MCRAE, of the Ogilvie Milling Co., is responsible for the statement that though the output of the mills of this concern have been increased to 15,000 sacks per day, yet so great is the demand for these flours that the firm cannot keep abreast with the orders coming in but are now some two weeks in arrears. They are overcoming this difficulty for the present by doubling the capacity of the Winnipeg mills.

THE well-known oatmeal millers, Gartley & Thomson, of London, Ont., have dissolved partnership. The business in future will be carried on by Mr. W. Thomson.

RICHARD JOHNSON, of Sparta, Ont., has been made head miller of R. Reid's flour mill at Blythewood. The business was formerly carried on by Reid & Nebbett, but the latter recently retired.

JAMES RICHARDSON, grain merchant, Kingston, Ont., says the grain crop in this district is a failure, owing to excessive rains and outgrowth of straw. There were very poor crops in barley, buckwheat, oats and spring wheat. Fall wheat was the only good yield.

GRAIN freights in Manitoba still remain unchanged: From Winnipeg and Red River Valley points in Manitoba, to Lake Superior ports, either Duluth or Fort William, is 21c. on grain, flour, etc., while from points just across the boundary to Duluth, the rate is 3c. less.

NOTICE is given in the Canada Gazette that Messrs. William Cluxton, of Peterboro; James Stevenson, James Kendry, H. A. Mulhern, of Peterboro, and Alex. Hamilton, of Warkworth, are seeking incorporation as the Peterboro Milling Co., Ltd., with a capital stock of $95,000.

BY the giving way of the front wall of Carter's mill, at St. Mary's, Ont., the other day, about 6,000 bushels of wheat rolled out and was mixed up with the stone and mortar of the wall in a great heap on the ground. Fortunately no person was hurt, though there were several narrow escapes. Loss about $800.

WORK on the McAllister grain elevator, Pembroke, Ont., has commenced. The main building will be fifty-five feet wide, seventy-five feet long and seventy-five feet high. The flour storehouse will be a two-storied building, thirty feet high and twenty-four feet wide, while the engine-house will be twenty-four by eighteen.

THE large mill of E. S. Edmonson & Co., in South Oshawa, Ont., was destroyed by fire on September 20. Messrs. Edmonson had recently started in the baking business and were doing an extensive trade. The electric plant of the town which was located in the mill, was also destroyed. The mill had been in operation for fifty years. Mr. Edmonson has for years been a prominent member of the Dominion Millers' Association, and universal sympathy will go with him in his loss.

THE World tells the story of sharp practices by the manager at Quebec of the business of a Toronto flour merchant. It is charged that he recently sold a car of flour for an Ontario miller on commission and reported the sale to the shipper at 2½c. per bag less than the price at which it was really sold. On the miller discovering the imposition and accusing the agent of it, the latter refunded what he wrongfully retained, but innocently pleaded that he didn't know he was doing wrong.

AFTER a partnership of nineteen years the firm of McLaughlin & Moore, of the Royal Dominion Mills, Toronto, has dissolved. Mr. Moore withdraws from the firm and Mr. McLaughlin becomes sole proprietor, conducting the business under the name of M. McLaughlin & Co. An extensive warehouse immediately adjoining the mill is now in course of erection which will add materially to the facilities of this large and constantly growing business. The most modern improvements will enter into the construction of the new buildings, lessening in a marked degree the labor of handling, packing and shipping the product of the mill. Everyone will wish Mr. McLaughlin all possible success in his business. Mr. Moore will probably engage in the grain business, making wheat his specialty.

GENERAL.

THE United States Food Exposition is being held at Madison Square garden, New York, continuing from Oct. 1 to Oct. 27.

THE United Kingdom imported 123,549 hundred-weights of cornmeal in the eight months ending with August, against 31,886 in the eight months ending with August, 1891.

ACCORDING to the usually well informed "Economiste Francais" Portugal's wheat crop threatens to be of exceptional mediocrity. In fact, our contemporary affirms that the scarcity of native wheat will call for importations thrice as heavy as those of the bad year, 1889.

ONE of the largest shipments of wheat of the present season was engaged at Chicago recently. Under this sale 750,000 bushels will be carried to Liverpool at 85½ cents per bushel for No. 2 hard winter wheat. This price includes cost of insurance and freight, and it is the price at which the wheat will be delivered in the Liverpool market.

A FLEET of whaleback steamers will next season enter into competition with the railroad propeller lines between Chicago and Buffalo for the trade in flour, grain, and other heavy merchandise. They will be 265 feet long and 38 feet wide, and will carry 100,000 bushels of wheat. The fleet will comprise seven or eight whalebacks of this size, two of which are now under construction.

PERSONAL.

Mr. A. Cavanagh, of Cavanagh & Spink, grain merchants, is moving to Winnipeg, Man., where the firm has opened an office.

Mr. J. C. Hay, of Listowel, who retired from the flour and grain trade about two years ago to enter the furniture manufacturing business, is now out of the furniture trade, and rumour says he will probably return to his first love. He is an ex-president of the Dominion Millers' Association, and one held in high esteem by the millers.

Mr. W. W. Ogilvie, of Montreal, Canada's greatest miller, and Mr. F. W. Thomson, of Winnipeg, manager of the Ogilvie Milling Co. at that point, are on a tour of inspection over the large property interests of this concern and for the purpose of surveying the general condition of the country.

Mr. J. R. Dundas, who is a member of the firm of Sadler, Dundas & Co., of Lindsay, Ont., owner of the Lindsay flour and saw mills, and who is also of the dry goods house of Dundas, Flavelle & Co., has left the town where he has resided for the past thirty-five years to enter the large produce firm of Gunn, Flavelle & Co., Toronto.

R. C. Clute, Q.C., of Belleville, Ont., is not only a lawyer of repute, but he takes a position among the larger farmers of the Dominion. He has recently returned from Manitoba, where he had been on a visit to his large farm of 2,500 acres, eight miles from Deloraine, which he has worked since 1881. He has 500 acres of wheat and constantly uses fifty horses in the cultivation of the farm. The grain is an excellent sample. The intention is to put in 600 acres of wheat next season.

Mr. Julius Ewald Beerbohm, founder, proprietor and editor of Beerbohm's "Evening Corn Trade List" and of the "Millers' Gazette and Corn Trade Journal," London, Eng., who died recently, was born in Memel, Germany, in 1810, and was in his early years engaged in the grain business in France, Russia and Germany. In 1847 he went to London, England, and entered trade. In 1867 he started the "Evening Corn Trade List," and later he added the "Millers' Gazette and Corn Trade Journal," both of which have become widely known in grain and milling circles. He was a man of sterling character. The journals he founded will be continued by the staff of aids he trained to the work.

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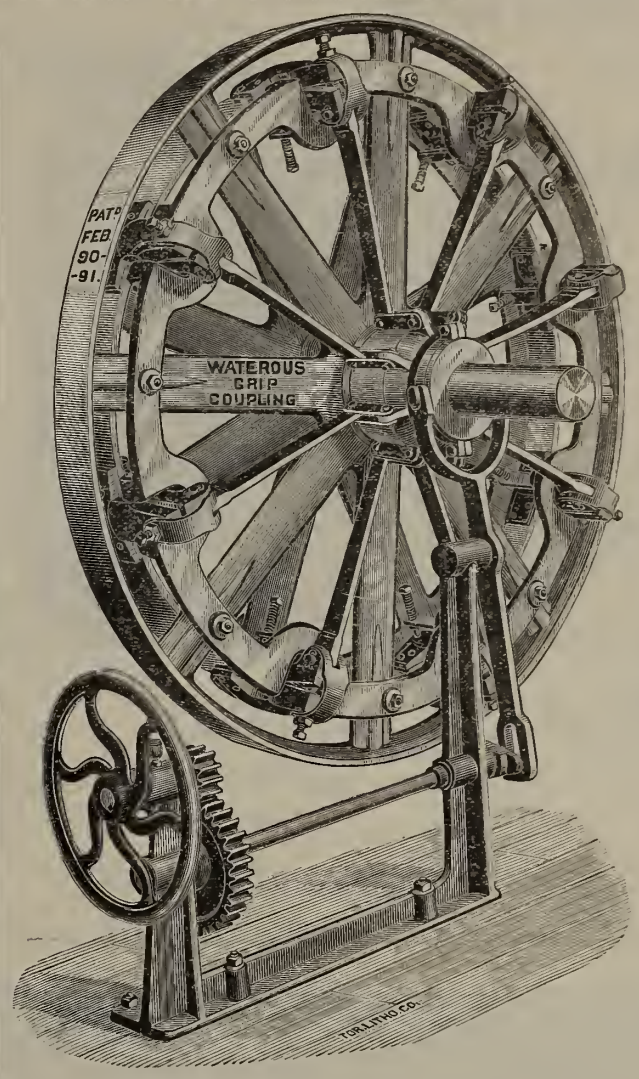

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OLD SERIES, VOL. X. } NUMBER 11.
NEW SERIES, VOL. II. }

TORONTO, ONT., NOVEMBER, 1892

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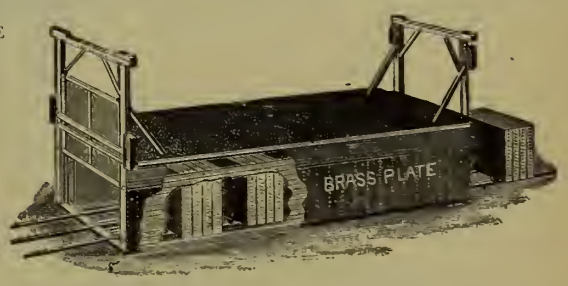

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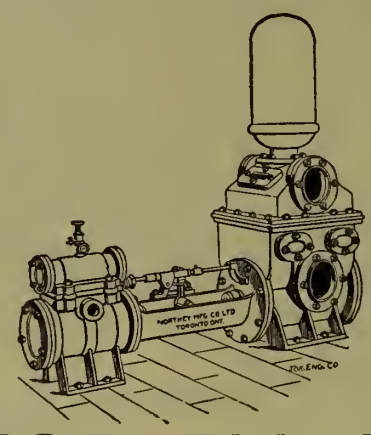

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THE CANADIAN MILLER

Old Series, Vol. X. } Number 11.
New Series, Vol. II. }

TORONTO, ONT., NOVEMBER, 1892

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N. H. STEVENS AND THE KENT MILLS.

ONE of the leading millers of western Ontario is Mr. N. H. Stevens, whose portrait, together with illustration of mills, we are pleased to place before the readers of the CANADIAN MILLER. Mr. Stevens hails originally from what we term eastern Ontario, Toronto being the dividing line, being born in 1841 in the township of Darlington, county of Durham, where his father, Mr. Enoch Stevens, farmed on an extensive scale. Foreseeing that there would be wider opportunities for his large family of boys, Mr. Stevens, senior, removed to Harwich in 1854, where he bought a fine tract of 800 acres of land near Blenheim. In 1867 the subject of this sketch left the farm and commenced business in Blenheim as a general merchant. He was also the local dispenser of justice, acting as magistrate, and more frequently as mediator. In 1873 Mr. Stevens disposed of his store, and spent a year in California, continuing, however, to make Blenheim his home until 1880, when he purchased an interest in the "Kent Mills" and removed to Chatham, of which place he has ever since been an honored and useful citizen. He took an active part in promoting the Erie and Huron Railway from its inception, and is still a director of that road. He is also a director of the Chatham Loan and Savings Co., a member of the board of trustees of the Collegiate Institute, and ex-president of the Board of Trade. Mr. Stevens always finds time to assist in promoting the interests of his town as well as to attend to one of the largest business concerns in western Ontario.

The "Kent Mills," the name by which Mr. Stevens milling property is designated, is one of the landmarks of Chatham, a flour mill bearing that name having been established on the same site in the early forties. In 1872 the concern fell into difficulties, and two or three years after was purchased by Campbell & Co., the senior member of the firm being the present M.P. for Kent. In 1881 Mr. N. H. Stevens joined the firm, when the title was changed to Campbell, Stevens & Co., and steps were at once taken to extend the trade and increase the capacity of the mill. During this year the mills were entirely rebuilt; all the stones and old machinery being discarded, and the modern roller plant substituted. This was the first roller process mill in western Ontario, and it is still perhaps the largest and most complete mill. In 1883 the firm erected the "Erie Mills," in St. Thomas, Mr. John Campbell becoming resident partner and manager of the branch establishment. The headquarters of the firm remained at Chatham until 1890, when the interests were separated, Mr. John Campbell becoming proprietor of the St. Thomas mill, while Mr. Arch. Campbell and Mr. Stevens continued jointly to control the Chatham establishment until a few months ago, when Mr. Stevens purchased Mr. Campbell's interest in the business, and is now the sole proprietor of the entire property.

In 1883 the mills were entirely destroyed by fire, but with characteristic energy the firm set to work to rebuild, and in 1884 the present magnificent mill and elevator were erected and equipped with a complete outfit of the latest and most improved machinery for the manufacture of the finest rolled flour. A year or two ago a cornmeal plant was added, and has been in constant operation ever since. The mill is a 50x60 feet brick building, five stories high, with brick engine and boiler house thirty-six feet square, and a brick chimney 100 feet high. The elevator is of wood, sheeted with metal, 50x60 feet, and stands 95 feet high, and has 30 grain bins with a capacity of 120,000 bushels. The wharf along the river front affords ample facilities for discharging and storing coal at the boiler-house door. The brick cooper shop and barrel warehouses (in which all the barrels required for the output of flour and cornmeal are manufactured

N. H. STEVENS.

from first-class stock purchased in the county), storehouses and business office are on the opposite side of the street from the mill and elevator, and are not shown in the illustration. An electric light plant, which was put in several years ago, lights the whole premises, while they are heated by steam throughout, no expense being spared to make the establishment a model one in every respect. The capacity of the mill is 400 barrels of flour and 250 barrels of cornmeal per day.

KENT MILLS AND ELEVATOR.

The great bulk of the flour, after supplying an extensive local trade, finds a market in the lower provinces, Newfoundland, West Indies, Liverpool and Glasgow, the "Kent Mills" brand being known at home and abroad as the very choicest flour in the market. The cornmeal is all shipped to the provinces, while wheat bran finds a ready market in the United States, the shipments averaging 100 carloads per year.

A railway a mile and a half long, built by the firm, connects the mills with the Erie & Huron Railway, and thus affords direct access to the G.T.R., C.P.R., and M.C.R. lines, enabling shipments to be made promptly and at the minimum of expense.

Extensive improvements have been made recently which not only increase the capacity of the "Kent Mills," but enable the enterprising proprietor to manufacture an article of flour that may perhaps be equalled, but certainly not excelled.

PURIFICATION.

IN regard to removing finished offals from purifiers, W. T. Bates writes in Milling that whenever possible offals should be removed not only in purification, but in all processes throughout the system. I say it should be done whenever practicable, because we know that it is not always possible without loss. Finished offals have always been removed from gravity purifiers, and the same can be done on sieves of any modern type with similar suitable material—that is semolina.

The impurities mixed with semolina are always pronounced and of a palpable nature, and could generally be dressed out, being large and light. When, however, we have to deal with fine middlings and dust it is a different matter, for then the impurities are small as the flour itself, and impalpable. An essential to finished purifier offals is perfectly dustless stock, and I maintain that to obtain this desideratum we must positively injure the flour product by forcing through the silk a portion of this light, impalpable offal. It is all very well for mill engineers to tell us it can and should be done, but let me say that we who are always in the mill ought to know something about it, while they depend too often upon theory and experiment. We, some of us, also make experiments, and have daily practice instead of theory to guide us, and by experiment I find this: Anything extracted in the form of dust from Semolina and good middlings, will, if sifted, yield a portion of fairly good flour, which has no business in the offal sack; but from low class middlings, such as from fourth break and tailings, I find that the dust is very impure, and not at all fit for the flour sack.

Further, I find that to obtain efficient purification I must lift out something more than offals, or else tail over an inordinate quantity, which has to be retreated on another machine. Knowing this, I conclude it is best to strike a fair average by dusting sufficient to get good purification, and all the good material through the purifier sieve, instead of over the tail; and that which is exhausted to send to the last roll, or last centrifugal but one, where it is quickly and suitably finished.

I consider we get rid of our offals quicker, because we extract a larger quantity than we do by using a light draught and tailing over a large bulk. Others, of course, will differ from me, but that is the result of my experience and investigations.

I may add that I am at present removing a large proportion of offals from semolina and low-grade middlings, but the intermediate products, for the reason given above, I cannot treat in the same manner, and, therefore, all that is extracted therefrom to further treatment lower in the system.

VIEWS AND INTERVIEWS.

Drowning A Miller.

The saying "drowning a miller," writes a newspaper correspondent, originated from the following fact: If the mill stream below the mill is dammed or stopped, the water is ponded back and the mill becomes what the millers call "tailed." There is too much water, the mill will not work and the miller is said to be "drowned out." Hence, when too much of any one article is put into a mixture it is called "drowning the miller."

Be Level-Headed.

The ruin of some business men is their weakness for experimenting with every new scheme that is laid before them. Others fly to the opposite extreme, and it is difficult to induce them to take hold of a new machine or consider an improvement in their business of any kind no matter how much can be said in its favor. Ruin, though possibly a little slower in coming, is just as sure to strike the ultra-conservative man as it will the most ultra-radical. It must always be remembered that the commonplace of to-day was the scouted innovation of yesterday. The potato, which tradition says was introduced into Russia in 1791, was declared by the people then to be the devil's fruit, and they would neither touch or plant it. Some people are too slow and others are too fast. The business man of this age cannot afford to lag behind in the race, and if improvements are going and he will not touch them, his neighbor, with greater enterprise and foresight, who has taken hold, will certainly outstrip him. Just as truly a business man cannot afford to earn a reputation for indulging in many wildcat schemes. It is here that a plentiful supply of horse sense stands a man in good stead.

Perhaps You.

Seldom a man cares to pull the mote out of his own eye. He can see the defect in his neighbor's eye, but his own, he thinks, is clear. It would be well, however, were there more looking within on the part of the individual. A recent writer puts the business aspect of the matter bluntly thus: "Those who are continually complaining of ill luck and the failure of making a success in life should look for the cause in themselves rather than in the conditions and circumstances which surround them. The man who makes a success of life is generally the one who thinks of his work, while the one who is a failure generally thinks of his wages much more than of his work. Honest and faithful application will win success every time. Look about you and note how true this is with workmen of your acquaintance. The world may owe every man a living, but it is not running round after him to pay it." A railroad man has said: "The demand is for men who are intelligent and take a keen interest in their work, and, by reading and study, aim to fit themselves for more efficient service." This class of men are in demand in every calling. The operative miller who works on these lines is the miller who becomes a credit to the milling trade.

Roll Surface.

A writer in the Miller's Review, Mr. R. Godwin, states in the last issue of that paper that "the question sometimes arises, how much work are my rolls capable of doing, or what is their capacity? For the benefit of those who desire to know, I will give the following good rule. Experience teaches us that one lineal inch of corrugated surface is sufficient for 1½ barrels of flour per twenty-four hours, and one lineal inch of smooth surface is sufficient for one barrel per twenty-four hours; for example: If I had five stands of 9x18 inch rolls, using four breaks, I would have 4x18=72 lineal inches of corrugated surface, which is good for 108 barrels, figuring 1½ barrels per lineal inch. I would also have 6×18=108 lineal inches of smooth surface, which is good for the same amount of flour—108 barrels—figuring one barrel for each lineal inch. Thus it will be seen that five stands of 9×18 rolls is a liberal roll surface for a 100-barrel mill. To obtain the above result the periphery speed should be about 1,000 feet per minute. The diameter of the rolls does not materially affect the above rule if the periphery speed is kept the same. There is but slight difference between the capacity of large and small rolls, the large roll having a little greater capacity. Another point in favor of the large roll is that its grinding surface does not come in contact with the stock as often as the small roll, from which we deduce the following facts: Less friction, consequently less heat, less expansion and less wear. Thus it is plainly seen that the large roll will last longer and treat the stock better than the small roll."

Bread Without Wheat.

Research shows that so-called "bread" has been made out of very many substances besides wheat and other cereals. In remote antiquity all kinds of almonds, nuts and grains were used for this purpose. In South America an enormous quantity of earth nuts is devoted to this object; they come from Virginia, South Carolina, Georgia and Tennessee. There they also use poppy seeds, chestnuts and rice. In ancient times the inhabitants of Thrace made a kind of flour out of the triangular and thorny roots of the water lily. In Syria they dried mulberries and made them into flour, the chief objection to which arose from the fact that it caused the hair to fall off. Persons with a large appetite became bald. The Egyptians made bread out of a mixture of wheat grains and flour. In Sweden, Lapland, Iceland and Tartary they made bread out of powdered fish, dried and ground. In northern countries they mix tomato flour with powdered meal. The Irish, in times of distress, like the inhabitants of Russia, made bread from a species of moss found in abundance on their coasts. It is said that this bread is nourishing and appetizing. The Indians, during their frequent famines, make an imitation bread of crushed white stones, bark of trees and sawdust. They consider themselves lucky when they can mix millet and its varieties with it. Sorgho, dura, rice, roots rich in starch, give up arrowroot, manioca and tapioca.

Flour And Age.

Does flour "improve with age"? This is a vital question to miller and baker. A writer in the Milling World answers with a decided "No." He says: "Flour fresh from the mill is in its best state. Flour left for weeks and months in bins and barrels may take on new hues, new scents and other new attributes, but these are not "improvements." They are the results of partial decomposition, of absorption from surroundings, and of changes that necessarily carry the flour away from the normal. Flour may be "aged," exactly as "cheese" is "aged," but flour that is "high' from the absorption of moisture, from the decomposition of starch, from the weakening of its gluten, and from the growth of bacteria is certainly not "improved." Bakers tell me that the flour is most easily handled and makes the best and longest-keeping bread when it is newest. I have never yet heard a first-class baker say that flour is "improved" by keeping it until it has changed perceptibly in color and odor. Buckwheat flour, rye flour and cornmeal are familiar examples of what takes place with "aging," and in wheat flour the deterioration is simply less marked. Much that is called "improvement" is a matter of taste merely in the consumer. One likes fresh butter and new cheese, while another prefers rancid butter and "high" cheese. The latter claims that "age improves butter and cheese." Just the same way age "improves" flour, by changes that introduce new features. But is it "improvement"?

Flour Mills A Nuisance.

The owner of a bungalow in Bombay, India, a native gentleman, has obtained damages from the Bombay Flour Mills Co. These mills came into being about seven years ago, and it seems that those who were responsible for their erection were threatened before the buildings had arisen from their foundations by the then owners of this same bungalow with an action for damages in case the mill or its adjuncts proved itself a nuisance. But the mills were built and set to work, and for six years not a word of complaint was heard. Last year another mill was added to the company's premises, and as it lay further away from the bungalow than the older buildings it can hardly be supposed to have materially increased any inconvenience that may have been caused by the mills. The plaintiff alleged that these mills constituted a nuisance by reason of their noise, dust, smoke and smell. The court rejected the three latter allegations, but admitted that the complainant might suffer to a certain extent from noise. The expert evidence that was called on this point was conflicting. One of the witnesses likened the sound to that of a waterfall, which he thought would be a nuisance, while another expert said the sound of the mills recalled nothing so much as a running stream, and was well calculated to promote sleep. The judge was inclined to the latter view, but he thought the case "lay on the borderland between a nuisance and a non-nuisance," and he awarded the plaintiff 5,000 rupees as indemnification for the loss of letting power, which the bungalow might have sustained from its proximity to the hum of the mill.

SPRINKLERS IN FLOUR MILLS.

THE views of a writer in a contemporary on the inutility of automatic sprinklers in flour mills may not be endorsed by all our readers, but as a somewhat complete statement of conditions from one point of view the remarks will repay perusal. This is the way the case is stated: "Sheathed studdings and ceilings are not proper subjects for automatic sprinklers, and the sprinkler company or agent who leads owners to equip such risks without due warning that "a fool and his money are soon parted," has perpetrated a fraud upon both the owners and the companies which he persuades to accept the risk at any reduction of rate, no matter how small. If the sprinkler agent had any respect for his company's record he would call attention to the fact that automatics are of little use in such plants; that money spent upon sprinklers was about as good as thrown away, and then end the matter by refusing to take such a contract at any price. Greed so over-reaches itself, however, that some sprinkler agents are ready to equip almost anything in the shape of a building rather than lose a contract. No one has yet heard that the stock companies have profited to any great extent by flour mill experience except, perhaps, to urge a better style of construction. The rule quoted for equipping all buildings is that every foot of wood surface within the building must be covered by a sprinkler head, or be within its water reach. Manifestly this cannot be accomplished in the flour mill. Elevators can have boxed-in heads, horizontal and oblique conveyers, and spouts can be treated in the same way, but what can be done with bolting chests, separators, purifiers, and all the similar machines about the flour mill? After a very careful investigation the writer came to the conclusion that ordinarily sixty per cent. and possibly in some cases seventy-five per cent. of the hazards of the flour mill could be protected by automatics without an expense that would be almost prohibitory, and this is believed to be a liberal estimate. Now I submit whether it is wise or just to give a twenty-five per cent. reduction of rate for something that covers not more than two-thirds of the hazard? The same state of facts that apply to the flour mill is also true in a lesser and a different sense in the elevator. The rule of equipment laid down that every foot of wood surface and every pulley bearing or gearing should be under the immediate protection of a sprinkler should be constantly kept in mind by both sprinkler agent and inspector, and nowhere more closely than in the flour mill and the elevator. I have looked over elevators where heads that could by no possibility throw water over eighteen inches upward were strung in lines from four to six feet below the woodwork they were supposed to protect, and where there was over 10,000 square feet of heavily dust-laden wood surface in a single story utterly unprotected by a sprinkler head. The pockets formed by bin construction at the sides of the elevator are really more dangerous than those in the centre of the building, yet what inspector ever saw a side pocket protected, while the centre ones have usually one and sometimes two sprinkler heads. These are cleaned weekly at the least, while the side pockets go unswept for months. For instance, the writer has seen nearly a bushel of dust taken out of a single pocket less than twelve inches wide at the opening and about six feet in height. Yet so much reliance is placed upon the thickness of the woodwork above that very little notice is taken of them as a hazard."

Markdale Standard: The CANADIAN MILLER is a beautifully printed and ably edited monthly.

NORTHWEST OBSERVATIONS.

OPINIONS OF AN ONTARIO MILLER.

A MONTH ago when we hinted that the crops in Manitoba and its neighbors, Dakota and Minnesota, were undoubtedly short, many pointed to the immense deliveries which we are free to confess seemed like a refutation of the statements made. But subsequent events have more than proved the truth of our diagnosis and there is now no doubt but there will be quite a lot of "hustling" to get wheat during the early months of the incoming year. The reports of one of our most prominent banks, which does business throughout Manitoba, go to show that instead of being below we were rather above the mark, and its manager declares the wheat crop will not average twelve bushels to the acre. This is indeed a tremendous descent from the marvellous predictions of certain gentlemen who rarely see a field of wheat, although we are bound to admit that they know one when they see it. It would be quite interesting to know if the "recouping" policy of these gentlemen had anything to do with their reports.

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Some one wants to know: "Will a small mill pay in Manitoba?" Well, they should pay, but they do not, and it was not until after a good deal of patient enquiry and putting of things together that your correspondent was enabled to get at the reason. The mills are well paid for gristing, for they charge fifteen cents per bushel for grinding, and I am told give from thirty-four to thirty-five pounds of flour, but the trouble is that there is not enough of it to do, as 500 barrels per day will supply every soul in Manitoba and the Northwest Territories with flour and leaves a little surplus for export; and there are very few places where the population is so dense that they would keep a twenty-five barrel mill going for a considerable portion of the year if limited to the local trade. The attempts at exporting flour by the small mills have, as a rule, proved utter failures, as they have not hitherto succeeded in competing against the large one with anything like success. Flour is very high in price to the consumer for the same or an inferior article which is sold in the outlying towns of Manitoba for $6 per barrel, is sold in Toronto—92c. freight—at $4 wholesale.

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Not by any means the least interesting thing to be seen in Manitoba this season were the large areas of White Fyfe wheat. It was not without considerable doubt as to the result that a determination was aimed at to watch the outcome. One peculiarity of this wheat seems to be its wonderful faculty for keeping itself pure, and of all the samples examined, and they were not few, there was very much less of admixture than in any other variety. The milling results, as near as we could get them, were still more favorably disappointing for we have indeed been surprised at the glutinous qualities which good milling has revealed in this wheat. This is perhaps a considerable confession for one prejudiced in favor of Red Fyfe to make and while we would not for a minute say anything that would look like going back on our opinions common honesty impels us to say what we find on this subject. In very bold contrast to the comparative success of this almost new variety (in Manitoba) is the utter failure, both in yield and milling qualities, of the Ladoga wheat. At many of the points visited the farmers unhesitatingly pronounced this variety a failure and many said things so unkind about those who introduced it that this journal would not like to publish them. Another variety has recently been introduced by some enterprising genius. It is a hybrid, and is so named, but as near as we could guess was a cross between the Ontario grown Colorado and Ladoga. At any rate it seemed to have inherited all the bad qualities of both.

× × × ×

There is no one thing which bids fair to be more disastrous to the future of the grain trade in Manitoba than the practice of mixing the seed, whether by design or by carelessness. That this evil has grown to such an extent as to merit outspoken treatment at the hands of those interested in that country is, or ought to be, conceded by all, and it is to the everlasting credit of the farmer members of the Board of Standard fixers that they had the courage to express themselves manfully on this question. It is next to impossible this season to get anything like a pure sample of any variety of wheat in all Manitoba, if we except White Fyfe; and much that is sold as Red Fyfe has only enough of that valuable class in it to show that at some time more or less remote a little had got mixed into the seed sown. The writer was shown a sample of as nearly prize Red-fern as the grower could produce representing in the neighborhood of 10,000 bushels which he marketed last year, and the skilled (?) buyer and the more skilful inspector both declared it to be No. 1 hard. Now it might be said the writer and not the inspector was wrong if we had not the grower and his seed behind us, but in this case there was not the slightest doubt as the writer himself visited the farm and saw the grain on the field. The main cause of the trouble is that as a rule the farmers do not know, or do not care to find out, whether their seed is pure or not, and in some cases they deliver for Fyfe wheat what they know to be a mixture of all kinds. The local buyers as a rule are as ignorant and as careless on this point as they can be, and the grain goes to the eastern or European markets and then comes a row. The buyers on the world's market do not care where the grain comes from so that it is of a certain quality, but they know their business and know it thoroughly, and moreover there is no means of forcing them to buy inferior grades at all, much less compelling them to pay the highest price for a very moderate product. This being the case it is not to be wondered at that the good name which Manitoba formerly had has gradually sunk until, thanks to the efforts of an interested few who attempted to trade on the old representation and the contributory negligence of the farmers it has now little or no reputation to lose. It is perhaps not known generally that the foreign buyers will not now accept as a general rule the grading of Manitoba wheat and that the larger dealers there must have "Fyfe samples." That the farmers of Manitoba and the Northwest Territories cannot grow Red Fyfe is false, as has been proven by the past, and it will be a great misfortune if the opinion of a lot of "afternoon farmers" shall prevail.

OBSERVER.

HANDLING GRAIN.

THE following letter has been received by the Montreal Corn Exchange from Mr. George Olds, traffic manager of the C.P.R., concerning the handling of grain for export:

"The question of grading Canadian grain intended for exportation via New York and Boston having apparently been satisfactorily settled at the meeting held in New York, and the practical closing of navigation being near at hand, it seems necessary for us to announce to the trade what arrangements it is proposed to make for the forwarding and handling of grain. As you are aware, three grades of Manitoba wheat has been agreed upon as the number of grades which the New York terminal lines will take care of, and Boston no doubt will take care of a like number of grades of this grain. So far as Manitoba wheat is concerned, for the present all that which may be intended for export via New York will pass from our line via Prescott, Ont. That for export via Boston will necessarily pass in the vicinity of Montreal, but as the inspection of Manitoba wheat is to be made at Winnipeg, and as inspectors' certificates are to accompany each consignment, it will not be necessary for the inspection of grain at the frontier to interfere in any way with this grain. With regard to grain from points in Ontario, that which may leave our line at Prescott for New York can be inspected at Prescott, where an inspector should be located. That for export via Boston will he accumulated into train loads at our Outremont yards here, and that is the place where the inspector would be located. Arrangements will no doubt be made for the necessary accommodation of the inspector at Outremont yard. The question which seems to remain now for your attention is the appointment of a competent inspector to take care of the interests of the grain shippers. We shall necessarily have to refuse to forward grain to the ports of New York or Boston until it has been inspected, and instructions will be given to our several general freight agents to prohibit the forwarding of grain to Boston or New York intended for export unless it is consigned to the care of some one at either of those ports who will have the authority, if necessary, to order the disposal of the grain in case terminal line agents should from any cause be unable to bulk any particular consignment. I think this precaution is necessary, and as much in the interests of the owner of the grain as of the railway companies. I wish to call particular attention to the danger of shippers of grain sending consignments of grain simply to the order of some Canadian board or individual having no business location at the ports of export. This feature caused great confusion last year, and largely resulted in all the loss and detention to our cars which occurred."

Owing to the new regulations brought in force by the United States trunk railway lines, all grain for export must be inspected either at point of shipment or at the frontier. Any grain that fails to grade No. 2 or better will be stopped and sent back to the nearest Canadian point, where it will be stored for account of the owner.

BY THE WAY.

TO pay for an article or service only to discover, at the time agreed, that "the goods," to use a store phrase, "can not be delivered," is one of the disappointments of life that few persons take kindly to. This is about the way, however, with marine insurance, as millers and grain men have, not unfrequently, discovered to their sorrow and loss. A cargo of flour or wheat is loaded for export, and that no unnecessary risks may be taken, the shipment is insured, the premium paid, the policy received and fyled away. Ye miller sleeps easy though his argosies are abroad. An accident occurs, as accidents will occur with those who go down in deep waters, and the goods insured are lost or seriously damaged. A fresh experience is then obtained, for it is learned that the insurance policy and the bill of lading have been so framed that the exceptions in these documents have become the rule and the loop holes are so many that it is a strange thing if the vessel owner experiences any difficulty in crawling out into dry land, leaving the poor victim, who holds the paid-for-policy, which was to protect his shipment from loss, down in the depths of a very unpleasant experience.

* * * *

For years business men on both sides of the Atlantic have been fighting this injustice, and the matter came up for discussion at the sessions of the Congress of the Chamber of Commerce, at London, Eng., in June last. It now begins to look, as a result of these years of agitation, as though some success would be achieved. A new bill of lading has been adopted by British merchants which in a large measure protects the shipper against the abuses of the old bill of lading, which has been so doctored, as every fresh experience had been obtained by vessel owners, so as to leave practically no protection to the shipper. Vessel owners, it is true, are refusing to accept the new bill of lading, or when doing so, they exact a higher rate of freight. But this is a difficulty that is regulated to some extent by the law of supply and demand, and if exporters take a firm stand in the matter the time will come when they will receive a share of justice.

* * * *

Redress need not be sought alone in the new bill of lading. A new marine insurance policy has been prepared by the well-known English Lloyd's which largely of itself, and especially when taken in conjunction with the new bill of lading, very fully covers the omissions of the usual marine insurance policy. We give here some of the main clauses of Lloyd's policy and if readers will carefully compare it with marine policies in their possession they will readily appreciate its strong points:—

This policy to pay all claims whatsoever arising from all causes if amounting to $75 (say £15) on each declaration. Including all risks whatsoever from time of leaving mills in the interior of America per any conveyance by land or by water, until safely delivered at warehouse of the consignees.

Including all risks from warehouses or manufactory inland and while waiting shipment on docks and warehouse and on quay.

Including all risk of craft to and from the vessel or vessels. Interest in each craft or lighter to be deemed a separate insurance; also risks as per the exceptions and conditions in bill of lading, including Negligence Clause, and all other risks until delivered to the consignees.

Including all risks of transhipment from any of the quays or wharves at port of destination to the final landing place, and, or, all other risks until delivered at consignee's warehouse or go-down, or warehouse where the merchandise is intended to be stored or delivered. All risks insured by the policy to attach while the goods are on the wharf previous to their being transhipped to their final landing place.

To pay average on each separate package or on the whole. In event of deviation or change of voyage, held covered at a premium to be hereafter arranged.

It is hereby agreed that the assured shall not be prejudiced by the insertion in the bill of lading of the following clauses: The act of God, perils of the sea, fire, barratry of the master and crew, enemies, pirates and thieves, arrests and restraints of princes, rulers and people; collisions, stranding and other accidents of navigation excepted, even when occasioned by negligence, default or error in judgment of the pilot, master, mariners or other servants of the shipowners.

Ship not answerable for losses through explosion, bursting of boilers, breakage of shafts, or any latent defect in machinery or hull not resulting from want of due diligence by the owners of the ship, or any of them, or by the ship's husband or manager.

* * * *

The question may be asked: Do not business men know the conditions of a policy before they agree to place insurance under it? Well, know many do not. They are insuring for protection, or insurance would be no use, and they take it for granted that an insurance policy is an insurance policy. Only when a loss occurs do they learn its true meaning. Two or three cases of the kind have come under our notice during the present year where well-known members of the Dominion Millers' Association were the losers. We will, likely, in a future number of the MILLER, give some particulars of these and will be glad to hear from others who have had their experience of marine insurance.

THE Canadian MILLER AND GRAIN TRADE REVIEW

PUBLISHED ON THE FIFTEENTH OF EACH MONTH
—BY—
ARTHUR G. MORTIMER
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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

HOLIDAY NUMBER.

THE next regular issue of the CANADIAN MILLER, bearing date of December, will be a special Xmas number, containing from two to three times the usual number of pages. The cover will bear the words "The Miller's Christmas," and is the work of a leading Canadian artist, representing a milling picture that, we believe, will, from an artistic, as also from a realistic point of view, be admired and appreciated by our many readers. This is being printed in colors in the best style of the art lithographic, and will constitute a handsome work of art.

The practical departments of the paper, familiar, and we have reason to know, much valued by the milling constituency covered by this journal, will appear as usual, supplemented by an attractive table of contents consisting of sketches, stories and poems specially written for "The Miller's Christmas," and applicable to the season, by prominent members of the milling trade, who are not alone adepts at the business of milling, but also in the use of that little instrument, the pen. We are also promised contributions from several well-known journalists who possess the ability to interest and entertain.

The typography of the number will not be its least attractive feature, and will be embellished with many illustrations suited to the character of the special contents.

Who better than the "jolly miller" has a right to a jolly Xmas? The CANADIAN MILLER knows of no other, and will spare neither effort or expense to make a deserving contribution in this direction.

No doubt many of our readers will be anxious to secure additional copies of "The Miller's Christmas," and, anticipating this need, an extra edition of the paper will be printed. A limited amount of space in the increased pages will be reserved for advertisers, who should write early for rates and space desired. To the advertiser, desiring to reach the millers, flour handlers and grain men of Canada, and those in foreign countries interested in the purchase of Canadian mill and cereal products, the number will be very valuable.

MANITOBA GRAIN INSPECTION.

A MONTH ago, when circumstances brought together in Winnipeg a number of eastern millers and grain men, a joint meeting of eastern and western representatives of these trades was held. The vexed question of Manitoba grain inspection was the subject of discussion. Everyone knows the trouble and unpleasantness that is continually occurring through the double inspection at Winnipeg and Port Arthur, supplemented by a third inspection sometimes when the grain reaches its destination. Is there not a remedy for this difficulty? A suggestion of the Winnipeg meeting, one in which eastern and western men very generally agreed, was to have only one inspection at Winnipeg, with three inspectors to attend to the work. There is force in this proposition, but in the opinion of some its operation is believed to be impracticable.

Minnesota and Duluth have overcome similar difficulties in these states by the appointment of state inspectors, whose subordinates operate under their direction and consequently work in unison and not at cross purposes. Is there anything to prevent the adoption of a like method in Canada?

A change of the Inspection Act would be necessary whatever amendment might be made, but this is not an insuperable obstacle. The question is one vital to the successful handling of Canadian grain, and now that the men particularly interested in the two opposite sections of the Dominion, have come together and exchanged views, the matter should not be allowed to remain much longer "vexata quæstio."

SPECULATIVE OPINION.

WHETHER, as Mr. C. Wood Davis and Mr. Erastus Wiman have predicted, the United States will find it necessary inside of five years to import wheat for home consumption in place of holding a position, as they do to-day, among the large exporters of the world, depends on various contingencies. One writer in reply to these gentlemen has taken the ground that when the United States farmer finds it profitable to engage vigorously in farming he has abundance of scope within his own country. He has not done so of late years because there has been no money in the business. When prices shall have advanced, say to $1.25 per bushel for wheat, in the same ratio will the production be increased. "On 40,000,000 of acres in wheat in 1891," says the writer, "we produced 600,000,000 bushels of wheat. This is an acreage of fifteen bushels. The average of England is thirty bushels. In France, on many of the small farms, it is fifty to sixty bushels." The argument is that the United States farmer must become more skilled in agricultural science and when this is the case, and a yield approaching somewhat near to that of England and France is secured the States will be found to have land sufficient to feed its own large and increasing population and still continue a large exporter. It is further contended that when the Nicaragua Canal is completed, shortening the distance from San Francisco to Liverpool almost 7,000 miles, instead of a yield of 62,000,000 bushels, as in 1891, the impetus to export trade will be so great that the farmers of California, Oregon and Washington, on the Pacific coast, may be counted on for 150,000,000 bushels.

Mr. Davis, in reply to this view in a carefully prepared paper in Milling, notes this fact "that in the ninth decade the world even in wheat increased but some 4,000,000 acres—only one-sixth as much as it increased in the eighth decade—being an augmentation of but 2.25 per cent., while the bread-eaters increased 14 per cent. and the per capita quota of wheat land diminished to .398 of an acre, reducing it to 93 per cent of the quota which obtained during the period when the price level was $1.69 per bushel." So long as these conditions continue Mr. Davis sees nothing to encourage the hope that farming will in the near future become a better paying calling and consequently encourage greater enterprise and more intelligent methods on the part of those who follow it. Taking a converse view Mr. Davis asks if it is not the case that when prices are low men are more inclined to be frugal and put forth greater efforts to increase insufficient returns both by cultivating better and farming the last possible rood of land, thereby, in a measure, defeating, by an augmentation of the product, the object in view. Climatic conditions, in the opinion of this writer, contribute more than any other cause to the varying character and size of our crops from year to year. Improved methods of culture and fertilization need not be expected to change meteorological conditions which in 1890 produced a short wheat crop and in 1891 a phenomenal crop. "No one country can, even with as diversified climate as ours," says Mr. Davis, "be superior in all cultures, and we can no more rival France in growing wheat than such countries can rival us in maize culture, or we rival Cuba in growing cane."

Mr. Davis adheres firmly to the opinion that the arable lands of the United States are becoming steadily exhausted, and these conditions will continue probably for all time to come.

ONE PEOPLE.

THE constantly increasing business intimacy that is growing up between the people of this province and those of Manitoba and the Northwest is one of the agreeable signs of the times. In every department of commerce the citizens of the eastern province, as we of Ontario are termed by Manitobians, have a live and indeed an abiding interest in our friends in the west. In many respects this is only natural, for has not Ontario heavy investments in the newer province, not only of money, but in her sons and daughters, who, following Horace Greely's advice, have gone west? Millers and grain men have an intelligent interest in the West. It is no mere phantom that is being chased when the belief is expressed that these provinces must in the not far distant future prove to be the granary of this great continent. Nor does the president of the Dominion Millers' Association stand alone in the opinion that Manitoba possesses all the possibilities of becoming some day one of the most extensive milling centres in the world. Differences of opinion may sometimes exist between those of the east and west regarding questions of trade, each viewing matters through their own provincial spectacles. But with enlarged and increasing transactions will come enlarged and broader views on both sides, and these apparently conflicting interests will almost unconsciously disappear. We are one people despite our provincialisms.

EDITORIAL NOTES.

WE regret that our reading pages this month are seriously encroached upon by advertisers. We plead guilty, but will not do it again. If advertisers must be represented in these columns, and they know their value, readers' interests cannot be interfered with. The remedy seems to be in an enlargement of the MILLER.

A DISPATCH of the 11th inst. from Winnipeg says: "Manitoba grain men are in difficulty, as trunk lines refuse to accept our oats and barley for export by way of New York or Boston. To get out of the difficulty Manitoba grain men will endeavor to gain the consent of the Ontario board to have Northwest oats and barley examined on its grade of standards, as railroad lines will then accept them." What with shortage of cars and inspection troubles of one kind and another, the road of the grain man is not the easiest to travel.

MILLERS in some sections of Ontario are making complaints of "dirty grain." We have no reason to suppose that this condition is general to any large extent, and yet the fact that more than one local newspaper has drawn attention to the matter is evidence that the practice is more common than it should be. We are told that, profiting by the experience of the past, Manitoba farmers are giving increased attention this year to the character of the grain that they place on the market. It would be a serious mistake for the farmers of Ontario, who are supposed to follow exact and correct methods of farming, to take a retrograde step in this important particular.

THE remarkably low prices of wheat in Great Britain during the present year has been a phenomena of the trade that has passed all understanding. Various efforts have been made to explain these conditions, but the divergence of opinion expressed is good evidence of the difficulty experienced in solving the problem. The quotations of June, 1889, 27s. 11d., have been referred to as the next lowest to 27s. 10d., the average price of British farmers' wheat this year. But the Liverpool Corn Trade News does not think that the figures of June, 1889, should be taken as a fair ruling of that period as "the inferior quality of samples then ruling was largely accountable for the debased rates of that time—the general level of prices then being 3s. per quarter higher than now." The annual average prices of recent years have been—1891, 37s. 1d.; 1890, 31s. 9d.; 1889, 29s. 9d.; 1888, 31s. 10d.; 1887, 32s. 6d.; 1886, 31s. 2d.; 1885, 32s. 10d.; 1884, 35s. 9d.; 1883, 41s. 7d. Taking all things together, however, this same authority considers that English wheat sold cheaper in September 1887, than ever before or since, viz., 28s. 5d. for fine quality.

MR. J. W. HENDRY, late manager for Mr. Peter McLaren, the big Ottawa lumberman, has expressed the opinion that with the C.P.R. running direct from the wheat country in the Northwest, and the Ottawa, Arnprior and Parry Sound road under construction, Ottawa is well adapted for the manufacture of flour on a large scale. "Ottawa," he says, "is bound to become a railway centre, but the great desideratum for bulk freight would be a canal to connect the waters of Lake Huron with the upper Ottawa.

* * * *

The falling off in the barley trade is very perceptible. "At this season of the year the receipts at Toronto are usually very heavy," said Thomas Flynn, of Coffee & Co., "but so far this year they have been almost nil. There is no demand from any quarter, and what little is changing hands is on the basis of feeding barley. A great deal of it has been stained badly, and this stuff offers at 30c. per bushel at outside points. The British markets are low also, and the outlook is not very cheering. Our export trade used to run from 9,000,000 to 11,000,000 bushels, but this year it is not likely to go over 2,000,000 bushels."

* * * *

The flour market, to use the language of a Toronto man not given to pleasantries, is "very dead, if the use of such a phrase is allowable. And flour was never so low, in my experience of forty years, as it is to-day, though wheat has been as low as it is now." To learn that one can buy a barrel of "extra" flour on Front street for $3—which at 196 pounds per barrel is only a fraction over a cent and a half per pound—and that "Manitoba patent," the highest grade, sells at $4.50, may be welcome news to the operative who loves cheap bread, but it sets the farmer thinking and the miller to scheming. In the summer of 1891 Manitoba hard wheat was worth $1.15 and straight roller flour $5.

* * * *

A breezy discussion has been in progress in Montreal between the Ogilvie Milling Co. and the Lake of the Woods Milling Co. on the one hand, and Mr. Aird and A. Smith, leading bakers, on the other, as to the rival merits of Minneapolis and Montreal flour. It grew out of the assertion by Mr. Aird, in speaking of the recent cut in the price of bread by Messrs. Stuart and Herbert, that he (Mr. Aird) had maintained his prices, because to get the best quality of flour which he had to import from Minneapolis, and pay duty on, he had to pay more than did the cheap bread men who used Canadian made flour. Mr. Smith supported Mr. Aird in the contention that Minneapolis flour surpassed that milled in Canada. Mr. Dewitt, of the Ogilvie Milling Co., says that Mr. Aird's assertion is sheer nonsense, and W. A. Hastings declares that such statements are made just for an excuse to keep up prices. Both these millers point to the prices for their brands in the British market as furnishing positive proof that no better flour is made in the world than in Canada. Mr. Stuart, the cheap bread man, goes so far as to say: "The Minneapolis flour is not so good as that made by W. W. Ogilvie & Co. and the Lake of the Woods Milling Co., while the net cost to the bakers who use the American flour is $1 per bbl. more than for Canadian." Mr. Stuart gives the following interesting statement of the cost of delivering bread in Montreal: "Our expense of running wagons is slightly over $4 per day in delivering 350 loaves, while it costs Mr. Aird, with his wagons delivering only 150 loaves each day, three cents a loaf." The theory of Messrs. Stewart and Herbert is that they sell bread equal in quality to that of the bakers who charge more per loa and get at least as much profit by using exclusively Canadian flour and keeping their delivery expenses at the minimum named.

W. W. Ogilvie, of Montreal, has returned from his visit to Manitoba. Speaking of his tour of investigation, he says: "I was very much impressed by the improved manner of stacking, and in many places I found the wheat already threshed and safe from the weather. I have never seen, at this season of the year, so much autumn ploughing, which should make seeding operations next spring much earlier than usual. I am convinced that next year the acreage of Manitoba will be increased thirty per cent. The quality of the wheat crop this year is better than was expected, and the condition of the grain could hardly be better—conditions that are certainly favorable to all concerned in Manitoba. Deliveries are becoming quite heavy at the larger stations, averaging 10,000 to 12,000 bushels a day each. The rapidity with which towns have sprung up along the Souris branch impressed me greatly, and I found an average of three to five elevators at each station."

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Erastus Wiman says of the election of Grover Cleveland as President of the United States: "The election of Mr. Cleveland is full of deep significance to Canada. It means the obliteration of the McKinley Bill so far as food products are concerned, if Canada is willing. Just how soon and under what conditions this vast event may occur it is impossible to say. But the tendency and the expectation from the victory will be unmistakably in this direction. Of course it will only come to Canada for a 'quid pro quo.' In other words, free trade in food will prevail if free trade in manufactures is afforded. It will be unreasonable to expect that the tariff will be reduced on Canadian products unless in Canada it is reduced on American products. Goods and not money must be the medium of exchange. Reciprocity will still be the basis of any possible arrangement, but reciprocity is much more possible under a Democratic regime than under Republican rule. The Republicans would withhold freedom of trade in the hope of compelling political union, unless forced by merchants and manufacturers to enlarged markets and free raw material. Democrats need no forcing in this direction, and will readily respond to the most liberal ideas of intercourse which the Canadians will propose. It has been a great duel between twelve million of voters, in which intelligent thought has had full sway, and the verdict is that a country cannot be taxed into prosperity."

* * * *

Professor John Goodfellow, who is Professor of Physiology and Hygiene at the Bow and Bromly Institute, England, and consulting chemist to the Master Bakers' Protection Society, has this to say of Manitoba flours: "Bakers and confectioners will do well to turn their attention to Manitoba flours. The Manitoba wheat is among the best in the world, and many experts maintain that the hard red Fyfe wheat has no equal. The flours are very strong and stable, absorbing much more water than English flour, and giving a good yield. They are perhaps a trifle too strong to be used alone, but blended with softer English flours they produce splendid bread. I have had, recently, occasion to thoroughly inquire into the merits of these flours, and from the results of my experiments and trials am able to recommend them as being sound and reliable. The best known are: Lake of the Woods strong bakers', Carberry Milling Co. Hungarian, and Carberry Milling Co. strong bakers', and Ogilvie's Hungarian. No.'s 4 and 2 are among the best flours I have ever examined; indeed I do not remember having seen a flour to equal No. 4 (Ogilvie's) in good color, combined with great strength and stability. No.'s 1 and 3 are naturally a little dark, but compare favorably with other American strong bakers' brands. As the results of my experiments, I am able to say that a blend of half Hungarian Manitoba and half soft English flour produced a splendid loaf of good flavor with a good yield. A blend of two-thirds of Manitoba flour and one-third of soft English also produced bulky loaves of good flavor."

* * * *

Presence of mind is a great thing in mill operating, but presence of mind won't get your hand out from between the gathering cog-wheels if your absent-mindedness and neglect to put up guards causes it to get caught.

Office of the CANADIAN MILLER,
November 15, 1892.

THE GENERAL SURVEY.

OFFICIAL returns from the leading wheat centres of the world, which are now mostly to hand, will give greater accuracy to any statements that may be made regarding the possibilities of wheat conditions for the remainder of the season. The report of the Indian Government is enlisting more than average attention. Not until 1884 was any system of annual estimates known in that country, and the figures of the crop just harvested are the smallest from that date up to the present. The total yield is 203,168,000 bushels of 60 pounds, as against 256,704,000 bushels in 1891, a reduction of 53,536,000 bushels, or 21 per cent. The area under crop was 24,088,000 acres, against 26,576,000 acres in 1891.

From India we turn to the last official return of the United States. Here the wheat crop for 1892 is estimated at 518,913,000 bushels. This is rather higher than the report of a month previous, but is in round figures 93,000,000 bushels below that of a year ago. The opinion is freely expressed in many quarters that this estimate is too high. The American Agriculturalist in the November issue prints an elaborate review of the wheat situation in that country, in which it aims to demonstrate by a system of state agency crop reports that the total wheat crop for 1892 cannot be placed at more than 494,434,000 bushels. Milling, in reply to this claim, says: "The situation to-day clearly indicates that the crops have been generally under-estimated throughout the world, and the reserves of old wheat that have been moving forward since the first of July sustain the views of those who insist that even the great products of 1891 of 612,000,000 was under-estimated, while the crop of 1890, reported less than 500,000,000, was at least 50,000,000 greater."

Canada, according to the estimates, is blessed with a crop of 55,000,000. France, it is claimed, will have a crop 80,000,000 bushels in excess of last year, and Russia will do 35,000,000 bushels better than a year ago.

The whole situation is summed up by Beerbohm, perhaps the best English authority, thus: "The plain fact indicated by returns to hand is that the world's production of wheat is about 6,000,000 quarters (48,000,000 bushels) less than last year. Indeed it will be seen that this year's crop barely reaches the average of the preceding five year's crop, which was 269,000,000 quarters. It is doubtful, too, whether the production of wheat in the past season has reached what may be called the normal requirements of the world, although these latter are of a somewhat elastic nature—depending on surrounding circumstances. Were it not, therefore, for the fact that the high prices of last autumn had the effect of shifting much of the surplus wheat from the exporting to the importing countries, it may safely be assumed that prices might, on the legitimate basis of supply and demand, be materially higher than they now are. It will take some time to restore this equilibrium, but meanwhile the most conservative of observers could hardly fail to arrive at the conclusion that, starting from the present basis of values, there chould be no need for discouragement."

CURRENT PRICES OF BREADSTUFFS.

WHEAT—Toronto: No. 2 white, 66c.; red, 65c.; spring, 62 to 63c. No. 1 hard, 86c.; No. 2 hard, 79c.; No. 3 hard, 76c.; No. 1 frosted, 64½c. Montreal: No. 2 hard, Manitoba wheat, 81 to 83c.; No. 3 hard, Manitoba wheat, 71 to 73c.

BARLEY: Steady but quiet. Toronto: No. 2. 44c. Buffalo: Canada No. 1, 83c.; No. 2, 78c.; No. 3, extra, 74c.

RYE: Toronto: Quiet, 50c. Buffalo: Firm, No. 2, 56c.; No. 2, 52c. asked in store and on track.

PEAS: Toronto; Not very active, 57c. for round lots.

OATS: Toronto: Very slow, mixed, 31c.; white, 32c. Montreal: 32 to 33c.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter affecting these important questions.

CANADIAN MILLERS CRITICISED.

THE Halifax Herald has made the charge that Canadian millers are sending to the West Indies flour of an inferior quality, thus prejudicing the market against the home product to the advantage of American millers. Careful investigation of the charge proves that the sweeping statements of the Herald are quite beyond the mark. About 25,000 barrels of Canadian flour have been shipped to the West Indies during the fourteen months ending September last. A considerable number of millers who helped to make up this amount have been communicated with, and almost without exception they have yet to learn that their flour has caused dissatisfaction.

There has been some criticism unfavorable to the class of barrels used, in part, in the shipments of Canadian flour, and in this regard the complaint is not altogether unfounded. It must be remembered, as Messrs. J. A. Chipman & Co., of Halifax, N.S., in a letter to N. Weatherston, Esq., agent of the Intercolonial Railway, Toronto, have pointed out: "It is a pretty long passage from Halifax to the Indies and after a steamer reaches the Gulf stream the temperature of the vessel must be increased and the flour landing in the West Indies is placed somewhat at a disadvantage in the start." This condition makes it important that our millers should place their flour for the Indies in packages as nearly air-tight as possible. A first-class round-hooped barrel is now being used by a number of shippers and from all reports would appear to give excellent satisfaction. One shipper says: "We sent a very excellent flour—about 900 barrels—put up in good barrels, and have reason to believe it gave the trade down there excellent satisfaction." Another: "All our shipments—500 or 600 barrels—have been made in first-class round-hooped barrels. The flour has all been a first-class article and from all reports received it has given good satisfaction." An exporting firm, engaged in the West India trade, writes, under date October 28: "There is no question but that a better barrel has been required, and though the flat hoops sell, the round-hoop barrels are much preferred. We have an order for 600 barrels flour Demerara and 300 barrels from Martinique. The former particularly asks us to ship round-hoop barrels, and Martinique tells us not to ship unless in round-hoop barrels."

The letters from which we have quoted have been the outcome of an enquiry made by the Monetary Times. It is not shown in every case—letters were received all told from twelve Ontario millers—that the use of the ordinary or flat-hooped barrel was a cause of complaint. Taken altogether, however, the consensus of opinion emphasizes the importance of tight packages, and we believe that millers generally will endorse the conclusion of our contemporary "that Canada must, if she desires to win and retain the West India market for flour or for other stuff, send only good goods and consult the taste of the market as to packages."

WHEATEN FLOUR IN CHINA.

It has been noted that considerable Canadian and American flour is being shipped to Japan, China and Central America, and that the consumption in these countries is on the increase. A contemporary very pertinently remarks: "If ever the Chinese take to eating wheaten-flour, a million tons a year will not satisfy them." Taking time by the forelock our big miller W. W. Ogilvie, sent a representative out to China some months ago. But even the big Ogilvie mills will fall a long way short of feeding the millions of that great country. The circumstance suggests the possibilities of flour milling, and these possibilities are, in no small measure, within the reach of Canadian millers.

REVIEW OF THE CANAL TOLLS QUESTION.

An article on "The Canal Tolls Question," against which the charge of uncandor can hardly be made, is to be found in the October number of The Lake Magazine, a new and creditable candidate for journalistic favor in this country. The writer is Mr. R. S. White, M. P. for Montreal and editor of the Gazette of that city.

Taking as the text of his paper article 27 of the Washington treaty of 1871, Mr. White proceeds to briefly review the history and practice of the clause, both as regards Canada and the United States. The system of rebates had its commencement in an Order-in-Council passed by the Dominion Government in the spring of 1884, when a refund of 18 cents per ton was granted on the toll of 20 cents per ton collected upon wheat, corn, peas and other cereals passing down the Welland and St. Lawrence canals for export. It was not until August 23, 1888, that the United States took exception to this procedure, when President Cleveland drew attention to the matter in a message to the Senate and recommended that "such legislative action be taken as will give Canadian vessels navigating our canals and their cargoes precisely the same advantages granted to our vessels and cargoes upon Canadian canals, and that the same be measured exactly by the same rule of discrimination." This recommendation was not acted upon and nothing more was heard of the matter until October, 1891, when the state department at Washington moved in the matter, primarily as a result of a memorial of the Lake Carriers' Association, complaining of the discrimination. The nature and results of the various conferences that have been held between the Canadian and United States governments from that date up to a few months ago, when President Harrison's retaliatory resolutions were put into force, are too well known by every reader of the CANADIAN MILLER to need any recital in these pages.

Mr. White shows very clearly that the grain must be carried down the whole length of the Welland and St. Lawrence canals to earn the reduction of tolls, and that these regulations are extended "to American vessels and cargoes equally with Canadian vessels and cargoes." "Putting aside altogether as paltry and contemptible," says Mr. White, "any contention that might be based on the fact that Canada has never by legislative enactment consented to give equality of treatment to Americans in her canals, it is indisputable that the artificial waterway between Lake Erie and Montreal is open and accessible to American vessels upon identically the same terms as to Canadians."

Viewing the question broadly, Mr. White is inclined to think that a point can be made against the Dominion Government for having confined the transhipment of grain to Canadian ports. The Government, in an Order-in-Council of date June 17, 1892, states the object of the rebate system to be the encouragement of ocean shipping via the St. Lawrence. "I am bound to say," writes Mr. White, "the Canadian case would be infinitely stronger, indeed impregnable, but for this lapse. . . . There is some reason for believing that the resort to retaliation by the United States was prompted by the refusal of the Canadian Government to extend the rebate to grain transhipped at Ogdensburg, and it certainly does seem somewhat anomalous that a policy adopted professedly to encourage an export trade by way of the St. Lawrence should be burked by a regulation requiring transhipment on the Canadian side. . . . While no treaty compact has been violated by Canada, nor the letter of the engagement broken, the spirit of the agreement has been transgressed in the withholding of the rebate from grain transhipped at an American point on its way to the ocean vessel."

That the United States Government have on certain occasions been guilty of interpreting the treaty between the two countries in a narrow and petulant spirit is shown in the action of the Federal Government exacting in 1885 "that a vessel arriving in the United States with a cargo from abroad should enter and discharge her cargo at the first port of entry she met." In entering the United States through the Camplain canal, the first port of entry would be Whitehall, at the northern extremity of the Whitehall canal. "There," said Mr. Fish, the then Secretary of State, "a vessel arriving with a foreign cargo would be obliged to discharge her cargo. If a Canadian vessel had a fancy for navigating the canal further on she could certainly do so and go as far as Albany," but without cargo. The trouble in this case seemed to have had its seat in a conflict of opinion between the State and Federal authorities. Sometime later, however, to use the language of Mr. White, "the American coon came down," and instructions were issued to permit Canadian vessels to unload at Buffalo and various other American ports.

Mr. White closes his article with the following reference to the recent reprisals of the United States:—"Canada grants a rebate of tolls on all cargoes bound for Montreal or a port east of Montreal, whether the vessels be British or American. The United States grants exemption from tolls to all cargoes through the Sault canal bound to Ogdensburg or any American port west of Ogdensburg, no matter what the nationality of the vessel. Just as the full tolls are exacted by Canada on all cargoes through the Welland canal to American ports, so are full tolls exacted by the United States on all cargoes through the Sault canal bound to Canadian ports. There we have what Secretary of State Foster calls "parity of conditions," and it is really somewhat difficult to discover in the conduct of the United States any justification for threats and denunciations on our part. Instead of either whining or menacing, the common sense course is to frankly admit that the Americans have simply taken a leaf out of our book; to recognize that the policy of reprisals is neither dignified nor profitable; and, conscious that two can play at the game of fence, to honestly seek to establish a large measure of reciprocity in the carrying trade. The Dominion Government has intimated that the discrimination in favor of the St. Lawrence route will be abandoned at the close of the present season, but the United States may fairly be asked for some equivalent for any surrender of the right to control the tolls for the use of the canals. They gave in 1871 mixed transportation by land and water to obtain the reciprocal use of our canals; they should be asked to restore the privilege of this carrying trade, to enlarge the treaty period for the navigation by Canadian vessels of Lake Michigan, and for the transit-in-bond of merchandise through the United States. If reciprocity in the coasting trade can be secured so much the better; but in any event the not very dignified game of recrimination and discrimination between the two countries ought to be terminated."

THE FLOUR MARKET.

Export trade continues discouraging. A fair trade is being done with the Maritime Provinces and Newfoundland, but as one report puts it, "There is very little enquiry for extra, as Newfoundland, the Maritime Provinces and Quebec do not want it as long as they can get good straight roller at present low prices." Home trade is active. Prices, of course, are unsatisfactory.

PRICES OF FLOUR AND MEALS.

"Straight grades," says the Dominion Millers' Bulletin, "of Ontario flour are $3.20 and $3.30; patents $3.40 and $3.45; and 80% $3.70 per barrel f.o.b. for Lower Provinces. Bran $9.75, $10 and $10.50 per ton f.o.b. Shorts $10.50 and $12 per ton f.o.b." Montreal: Sales of straight roller, in car lots, have been made at $3.45 to $3.50 on track; $3.45 to $3.65 may be given as a current quotation in car lots; broken lots $3.70 to $3.80. Red dog has sold as low as 92½c. per bag, with 95c. to $1 running quotation. Patent spring $4.50; patent winter $4 to $4.50; extra $3.20 to $3.50; superfine $2.75 to $3.15; strong bakers', Manitoba, $4 to $4.20. Winnipeg: Prices to local trade: Patents $2.05; strong bakers' $1.80; XXXX 80 to 90c.; superfine 65 to 70c. Bran $8 per ton; shorts $10. Rolled and granulated oatmeal $1.85 to $2 per sack, according to brand. Cornmeal $1.65 to $1.70 per 100 lbs. Split peas $2.60 to $2.65 per 100 lbs. Beans $1.75 to $1.80 per bushel. Pot barley $2.50 to $2.60 per 100 lbs. Pearl barley $4 to $4.20.

THE NEWS.

CANADA.

SAMUEL MANN'S new grain elevator, at Stittsville, Ont., is completed.

THE machinery is being put into the new flour mill at Killarney, Man.

THE Alberta flour mill, at Calgary, N.W.T., is now completed and running.

THE oatmeal mill at Portage la Prairie, Man., is shipping its product to England.

THE Winnipeg grain exchange is now located in its new quarters, Princess street.

WORK on the new McAllister elevator, Pembroke, Ont., is being pushed ahead with energy.

THE capital stock of the Portage Farmers' Elevator Co. has been increased from $12,000 to $50,000.

VACHON & Co., millers and flour and grain, Stanfold, Que., new co-partnership H. St. Cyr & J. Vachon.

TAYLOR & Co., commission, Montreal, G. T. Maley registers that he has ceased doing business under this style.

ST. JEAN & LACROIX, flour, feed, coal, etc., Maisonneuve, Que., new co-partnership—B. St. Jean & Lacroix.

NEAR Quebec, Que., the Seminary Mill on the Montmorenci River, was burned. Loss $6,000; insurance $1,000.

THE Lake of the Woods Milling Co. have declared a dividend on the capital stock of six per cent. out of the net earnings of the past year.

THE farmers mill at Portage la Prairie is now in course of construction. The building will be a four storey one, 34x50 feet, costing about $5,000.

J. W. FORD, of the roller mills, Markdale, Ont., has purchased an interest in the Flesherton Milling Co. He will take an active interest in both concerns.

THE City Council of St. John, N.B., have accepted the Canadian Pacific Railway Co.'s terms for the construction of a grain elevator of 300,000 bushels capacity.

THE contract has been awarded for the alterations and improvements in the Blythe Flour Mills, Peterborough, Ont., recently passed into the hands of a strong syndicate.

AMONG the patents recently issued by the Canadian patent office was No. 40,020, a fishway to J. Bower, and a patent for conveying grain, No. 40,088, was issued to F. E. Duckham.

THE Lake of the Woods Milling Co. have secured a perpetual injunction restraining the Citizens' Milling Co., of Toronto, from selling flour in bags stamped with plaintiffs' trade mark.

MCKAY & Co., Ottawa, Ont., are having carriers constructed from their mill to their new storehouse on the opposite side of the street, conveying flour direct from mill to storehouse.

THE steamers W. B. Hall, Campana and Rosedale have been engaged by the Canadian Pacific Railway company to carry grain from Fort William to Owen Sound for the rest of the season.

A YOUNG man named Holmes Withrow, employed in a grist mill, at Rawdon, N.S., caught his arm in some cogs of a wheel and it was torn from the socket at the shoulder, leaving the arm hanging to the shaft.

THE grinding-in-transit privilege on Manitoba wheat has been restored, thanks to the efforts of the Dominion Millers' Association. Secretary Watts says: "Bill wheat to Montreal. Stop at Sarnia tunnel for orders."

THE grist mill at Jarvis, Ont., has been bought by Messrs. A. & S. E. Davidson, who are having it altered and refitted with four sets of rolls and a new engine and boiler. The mill will be running by the middle of November.

THE Midland flour mill, which is said to have cost $12,000, was recently sold under mortgage to Mr. A. Miscampbell, M.P.P., for $4,300. This gentleman afterwards sold it to Copeland Bros., of Penetanguishene and Elmvale.

A LARGE addition has been made to the membership of the Dominion Millers' Association this fall. Millers find it pays to become a member of the Association and reap the benefits of the Central Wheat Buyer's office, rather than pay the commissions charged outsiders.

MR. ARCHIBALD CAMPBELL, M.P., of Chatham, Ont., has commenced work on his new mill at West Toronto Junction. The ground is already staked out and the brick work of the mill will probably be commenced some time next month. The flour mill is to be 50x65 feet, and five stories in height. The elevator will have a capacity of 60,000 bushels. The town conveys to Mr. Campbell as a site the Merritt property, lying between the Stanley House and Wagner & Zeidler's factory and grants him exemption from taxes and 20,000,000 gallons of water per annum free for ten years.

J. A. K. DRUMMOND, for years a grain dealer at High Bluff, Man., was pressed by creditors in 1886, when he obtained his discharge and was content to do less business.. Last September he gave a chattel mortgage for $2,600. Now he makes an assignment.

A FATAL accident occurred at Wm. Milne's new mill, Burk's Fall's, Ont., on the 6th inst., resulting in the death of F. Garher, a young millwright. He was working on the frame of the mill at an elevation of twenty-five feet from the ground and missed his footing fell and smashed his head on a rock beneath.

CLENDENING'S flour mill, near Carman, Man., was completely wrecked a fortnight ago by the explosion of a boiler. Everything is a complete ruin. Pieces of the boiler were blown a distance of 300 feet. There were 500 feet of siding over the boiler in process of drying. The loss is estimated at about $8,000. No insurance.

THE Grand Trunk have announced that they are ready to open the Collingwood elevators for the reception of wheat provided they could get guaranteed quantities which combined would not be less than 100,000 bushels. It is stipulated that grain shall be moved out of the elevator not later than Dec. 31 unless special arrangements are made.

AN increase with Grand Trunk and Canadian Pacific Railways in the rate of freight on grain to Montreal for export came into effect on the 14th inst. and is as follows: Toronto and east, 12½ cents per 100 pounds; west of Toronto to London, St. Thomas, etc., 14 cents; Northwest, 15 cents. These charges are exclusive of Montreal terminals.

WM. PIERCE, undertaker and grist mill owner, Brantford, Ont., assigned on the 5th inst., with $2,540 liabilities and about $1,400 assets, the latter consisting of $1,100 in stock and $300 in book debts. Pierce has been gradually falling behind for a couple of years past, and it is said that he suffered from too keen competition. No offer of a compromise has been made, and there is no security to offer.

A BAKER in Toronto got a carload of flour recently from the west, and when his first batch was put in the oven the place commenced to smell like a coal oil shop. The bread was, however, sent out and on the following day the whole lot was found waiting for the drivers as they went their rounds. The flour had been shipped in a coal oil car, and although no evidence of actual contact could be found in most of the bags, so sensitive is flour that the whole consignment was ruined. The demand for this particular flavor does not appear to have reached the point where even our bakers can subsist on it.

MR. J. J. CURRAN, M.P., of Montreal, and Mr. W. W. Ogilvie, representing millers and others who derive power from the water of the Lachine Canal, have had a conference with the Minister of Railways and Canals about the best time to let water out of the canal for the construction of piers for the new four tracked bridge which is to be built across the canal this winter at Wellington Street. The bridge will have to be constructed in the interval between the close of this year's season of navigation and the beginning of next year's. It is being arranged that as short a delay as possible will be caused to the mills which take their power from the canal.

THE Central Wheat Buyer, Toronto, in a circular letter to his clients says: "Like last year as navigation draws to a close vessels are hard to get, and freight by lake and rail is about two cents per bushel higher, and insurance one-half cent, than two weeks ago, which keeps up the price of wheat at Owen Sound and Sarnia. Cars are also so scarce at these points that a delay of one to three or four weeks in shipping after wheat is ordered out generally occurs now. Quick delivery can be got from North Bay, and as all rail shipments will now increase rapidly, with an order in hand I can frequently buy for the millers better than I can quote them."

THE Board of Trade, Woodstock, Ont., having passed a unanimous resolution asking the town council to grant ten years exemption from taxes and free water to Thomas McClay, who proposes constructing a 125 barrel flouring mill, the council after some discussion unanimously passed a by-law legalizing the action. It will be a four-storey mill, second to none in Canada, and will be in operation by the first of the new year. Thomas McDonald, who lately suffered the loss of the Great Western flour mill in that place, proposes to rebuild it as a 300 barrel mill for the manufacture of oatmeal, split peas and pot barley. He proposes that a joint stock company be formed with the necessary capital of $16,000, of which the citizens of Woodstock and farmers of the district shall take $8,000.

THE Sentinel, of Pilot Mound, Man., has the following to say regarding the recent destruction of the mill at that place. "The total destruction of the Pilot Mound roller and oatmeal mill by fire, adds one to the list of mills that have been burned down in Manitoba. The fire originated about the engine room after the mill had been shut down for the night. Being all of wood and dry as possible, in a few moments the whole structure was in a blaze. Little or nothing was saved. The mill was owned by R. Whitelaw, of Woodstock, and was leased to Dow & Will. The loss may be estimated at about $15,000. It is understood that there is an insurance of $5,000 on building and machinery, and $1,000 on the stock. The business men of the town will entirely lose the bonus which was given to aid in the erection of the mill."

PERSONAL.

Mr. W. J. Stockman, of Leith, Scotland, in a letter to the CANADIAN MILLER, says: "The flour trade is now reviving after a long depression."

Mr. Lawrence Coffee, of the firm of L. Coffee &Co., of Toronto, is dead, aged 72. He had been engaged in the grain business in the city for 47 years.

Mr. Charles Merrill, miller, at the Kent Mills, Chatham, Ont., says Neill, the murderer recently hanged in England, at one time lived at Belle River, Ont., where he was known as a jolly good fellow.

Mr. Joseph Dickson, of Toronto, has been appointed grain inspector at the frontier, and he will be stationed at Suspension Bridge. His duty will be to inspect Canadian grain intended for export via New York.

Mr. Robert Balantine, of Grassmere, Ont., died suddenly a few days ago. Deceased was one of the oldest settlers in the Huntsville section, and many years ago erected a grist mill, which is still used by the settlers.

Mr. W. W. Ogilvie, of Montreal, has purchased the Somerville farm on the Lower Lachine road. The farm covers about 180 acres, and the price paid was $30,000 cash. Mr. Ogilvie intends to erect a summer residence which will be within easy access of the city, and the improvements to be made upon the property will render it one of the most attractive and delightful summer residences on the Island of Montreal.

Mr. Thomas Ellis, of Guelph, Ont., who died within the month, in his seventieth year, came of a family which had been millers for generations. His daughter, Mrs. J. C. Kcliher, when in England this summer had the pleasure of seeing the old weatherbeaten mill, near Tavistock, in Devonshire, in which her father and so many of his ancestors had learned their business. Being of an active, stirring disposition, he came out to Canada in 1845, and took a position as head miller with Mr. David Allan, at Guelph. After three or four years here he took charge for seven years of the milling business of the late Jacob Hespeler, at Hespeler. Having been advised to leave the milling on account of his health, he leased the Western hotel in Guelph and afterwards bought the American hotel on Upper Wyndham street, which he remodelled and improved and extended, and over which he presided for a quarter of a century, holding a large farmer's trade and making it a centre in many ways. Since retiring from the business six or seven years ago, he has lived privately with Mrs. Ellis in the city.

TRADE NOTES.

The advertisement in another column of Myers' Royal Horse and Cattle Spice is worthy the attention of all persons whose business or pleasure leads them to keep one or more horses. This article has all the advantage of having been on the market for years and being thoroughly tested and proven. This experience is not alone confined to this country, but in Great Britain and Europe it has been in daily use for over 30 years.

The Waterous Engine Works Co., of Brantford, report that the following sales have recently been made: One pair of Grip gears, two pulleys and two couplings furnished Isaac Warcup, of Oakville; four Grip pulleys 48x8 to the Toronto Electric Light Co.; two pair of Grip gears, mortice wheel 72 inches in diameter, 10 inch face, and one 82x12 steel rim pulley, and two 56 inch Leffel water wheels for Perth Electric Light Co.; also one 40x7½, and one 30x7½ Grip pulleys for A. Woods grist mill at Smith's Falls; one 62-inch pulley 20-inch face, with Grip attachment for the Hamilton Electric Light and Power Co. An order for three grain elevators from Kalmonka, Russia, being third order from same parties.

The Dodge Wood Split Pulley Co., of Toronto, have lately issued a handsome new catalogue, which they take pleasure in mailing to the power users of the Dominion. This latest issue contains cuts of their latest improvements in pulleys of all kinds. There is the small split pulley 3 inches in diameter, adaptable to a shaft as large as two inches diameter; the tight and loose pulley—a handsome iron centre split belt pulley for those who prefer this style; the large heavy driving pulley for heaviest powers; dynamo pulleys; rope wheels; and, in fact, everything in the way of pulleys is touched upon. The Dodge Co. make a specialty of power transmission by ropes and belts, and are always pleased to give information and estimates on anything in this line. They invite correspondence with the milling trade.

SHORTS AND SHIPSTUFF.

Bread, nearly 1,900 years old, in a good state of preservation, has been unearthed in Pompeii.

If a miller undertakes to mill inferior wheats and puts his flour products in market with that made from superior qualities his name will be Dinnis.

In the first chapter of Exodus and eleventh verse the first mention of wheat is made: "And God said, Let the earth put forth grass, herb yielding seed."

If you happen to own a white cat
It will lie in the coal by the hour;
While if it's as black as your hat,
Be assured it will get in the flour.

From the researches of a German specialist, Prof. Weber, it appears that spontaneous combustion never takes place in flour mills, and that sparks alone will not set fire to flour-mill dust.

There is as much enterprising ability to be displayed in bringing about and sustaining the production of high grades of wheat for milling purposes, in a locality, as there is in perfecting the mill to grind it.

After sixteen years of experimenting, E. S. Carman, editor of the Rural New Yorker, has succeeded in producing a new grain which is a cross between wheat and rye. The hybrid was made by mixing the pollen of wheat and rye blossoms. It is believed that the new grain is firmly established.

There is reason to believe that those who talk so loosely about wanting to own the earth "with a fence around it," never took the trouble to figure out how much the fence would cost. The largest farm in the world is said to be in Louisiana and embraces 1,000,000 acres. It cost $50,000 to fence it.

"We once knew," says the Australian Miller, "a self-conceited gentleman 'who didn't need to be told his business;' he rather guessed he could manage his own affairs without help from outsiders—no wrinkles of the trade he didn't know; he didn't need any associations, or trade papers either, not he. He went bung last week!"

GENERAL MILLING NEWS.

A German scientist has shown that the lands in Germany devoted to grain used in beer production would support 50,000,000 people.

The country press, says the Minneapolis Market Record, is commenting favorably on the policy of the Northern Pacific road in supplying cars to all parties applying for them to ship wheat in, without regard to their proprietary interest in elevators.

A circular has been issued by the Minneapolis Chamber of Commerce denying that any Canadian wheat is being ground for export by the Minneapolis mills. The regulations of the treasury department make the grinding of Canadian grain there impracticable.

The Northwestern Miller, under date of Nov. 15, reports the stock of wheat in Minneapolis private elevators at 1,578,000 bushels, a gain for the week of 128,000 bushels. The aggregate stock at Minneapolis and Duluth is 15,644,316, or 1,955,792 bushels more than last Monday.

During the past year about 2,000,000 bushels of elevator storage has been built in Minneapolis, says the Northwestern Miller. In most cases the new houses have consisted of annexes put up by companies which already operated terminal plants. All but nine of the houses are recognized by the Chamber of Commerce as "regular," the rest coming under the head of "private." It is the regular houses that have gained mainly by the erection of new buildings, the aggregate of private houses being left practically the same as a year ago. The total elevator storage is 18,180,000 bushels, and the storage connected with the mills w·lls the amount to 19,410,000 bushels.

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"I have, however, much pleasure in drawing your attention to the fact that the commission income alone, as you will see by referring to the Revenue Account, **exceeded the total claims for fire losses, a record, I believe, unprecedented in the history of any other fire insurance company either here or in the mother country.**
The assurers with this Company, since it was established in 1885, have already saved on the current exacted rates, upwards of **forty-five thousand dollars.**
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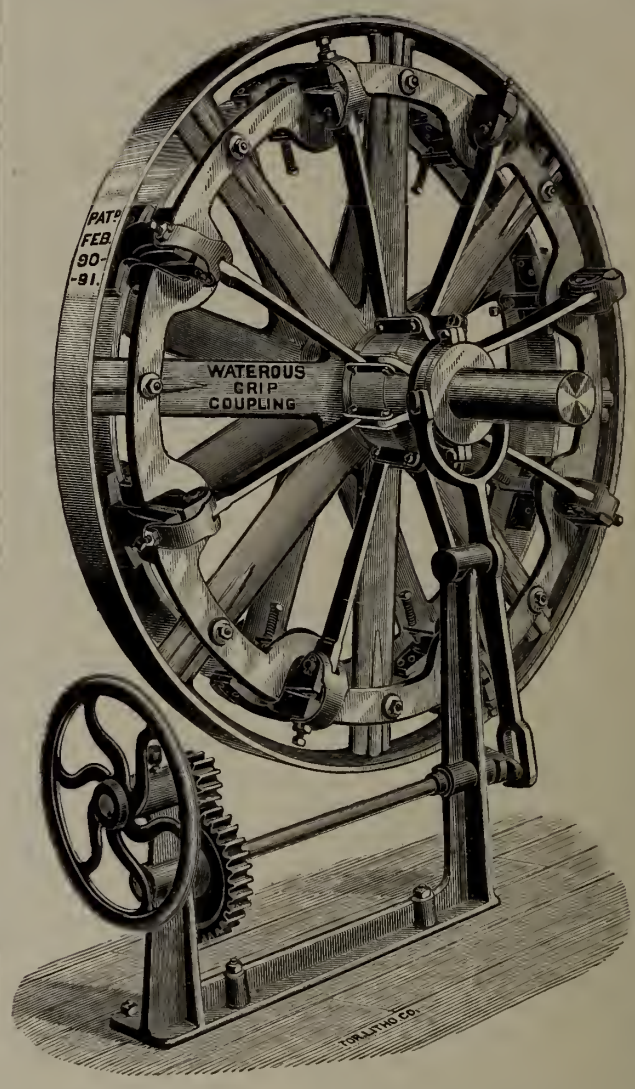

Send for estimate of cost to attach Grips to gears driving Chop Stone or for Grip Coupling to enable shafts to lie idle that now run 24 hours while only needed 8 or 10, saving wear and tear, oil, time, and possible firing of your mill by neglected journals.

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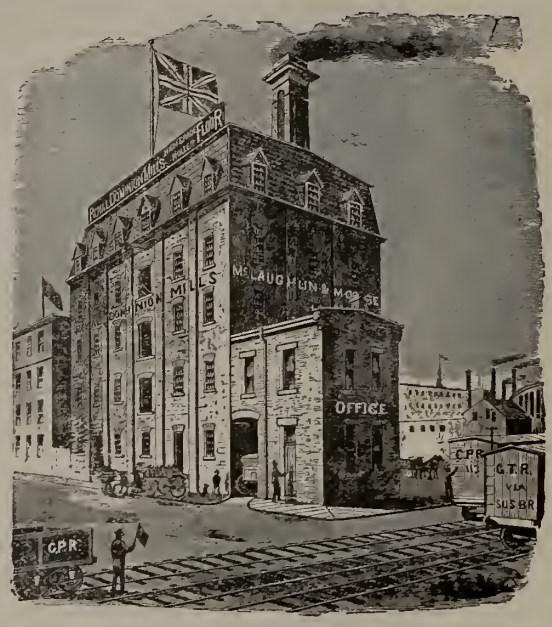

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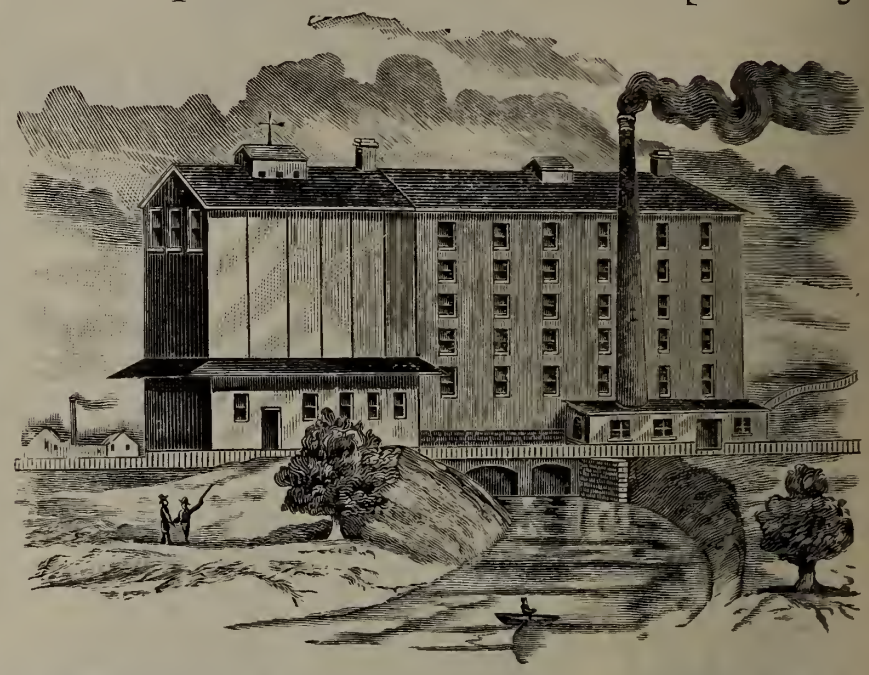

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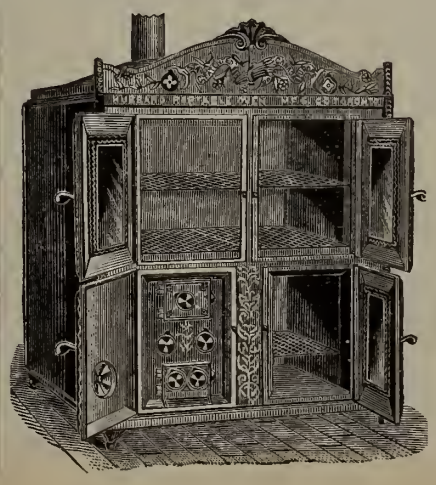

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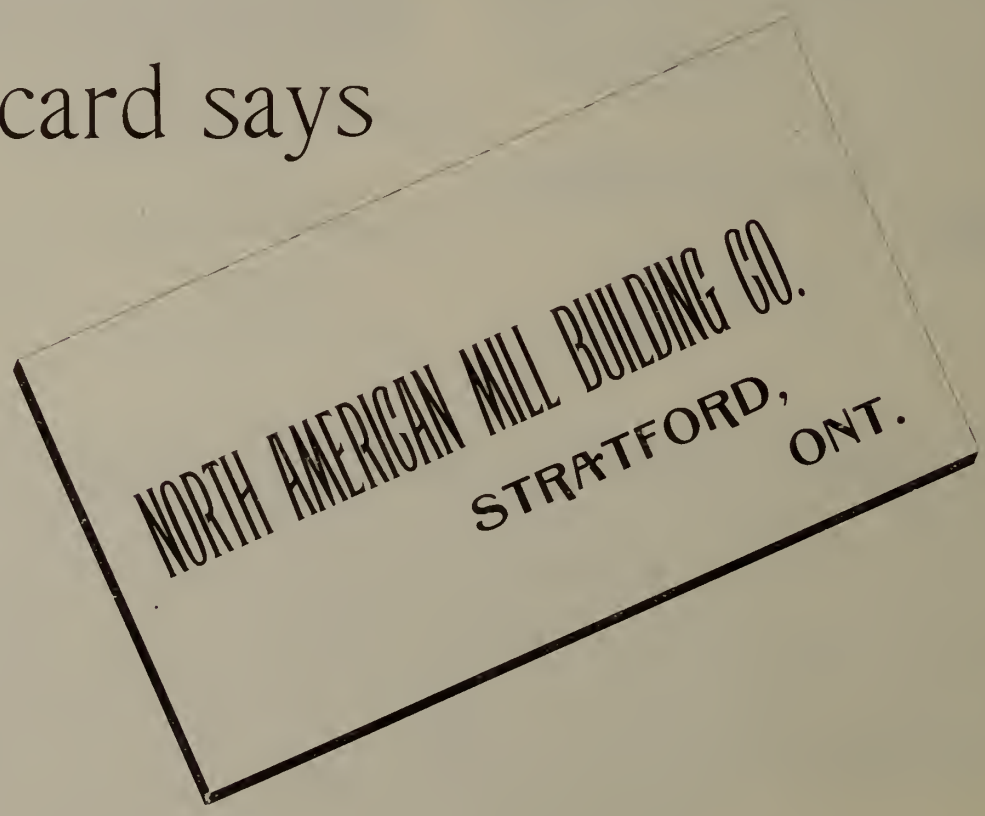

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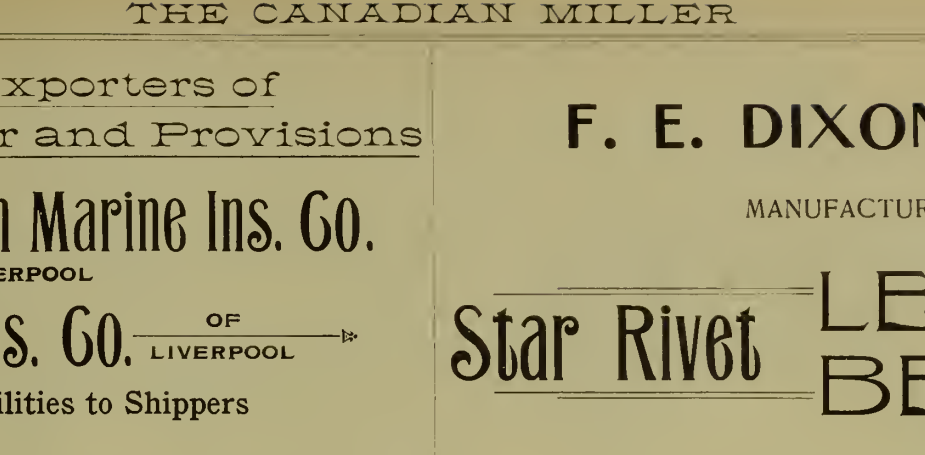

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OLD SERIES, VOL. X. NEW SERIES, VOL. II. } NUMBER 12. TORONTO, ONT., DECEMBER, 1892 { TERMS, $1,00 PER YEAR SINGLE COPIES, 10 CENTS

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THE CANADIAN MILLER

Old Series, Vol. X. } Number 12. TORONTO, ONT., DECEMBER, 1892 { Terms, $1.00 Per Year
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THE MILLER IN LITERATURE.

BY THE EDITOR.

THAT literature, which finds its source of inspiration amid the beauties of Nature and the experiences of human nature, reaches deep down into heart and mind. The real will impress where the artificial only marks its passing by. "To hold, as 't were, the mirror up to Nature," to quote the familiar language of Shakespeare, is a source of strength to any writer. Wordsworth has said:

Come forth into the light of things,
Let Nature be your teacher.

Because Little Nell, Sam Weller, Mr. Quilp and Mr. Swiveller are counterparts of the people we meet every day is the reason why we never tire of reading Dickens. "He's tough, ma'am, tough is J. B. Tough and de-vilish sly," as correctly pourtrays the individual of o-day as when Dombey & Son was written. Shakespeare's words have become part and parcel of the vocabulary of every English-speaking nation because they clearly express the feelings of men and women of all lands. To-day, and doubtless in all ages, Burns' words,

The rank is but the guinea's stamp,
The man's a gowd for a' that,

will express the innermost thoughts of man as truly as when they were first penned by the Peasant Poet.

* * * *

The old mill, the dusty miller and the miller's daughter have, through many ages, occupied no unfamiliar or insignificant place in literature. The surroundings—more especially so, perhaps, in the early years of milling, than to-day, when steam and electrical power have made the establishment of a mill possible in city or country—have usually been of a character to give suggestion to the fancy and rein to the imagination, especially to writers of poetry. Even yet, with all the changes that commercial progress has made, there is a picturesqueness and suggestiveness in the operations of a mill and the quiet-going complacency of the miller that gives to the place and the man a kinship to literary and artistic thought.

The miller is found in frequent spots in the literature of the past, and he bobs up ever and anon as a central figure in much that is written to-day.

Shakespeare has used the experience of a miller to give point to one of the shrewdest utterances in Titus Andronicus when he puts into the mouth of Demetricus these words:

What, man! more water glideth by the mill
Than wots the miller of.

More perfectly, perhaps, than by any other author, has the miller been immortalized in literature by Lord Tennyson. As a frontispiece to the Christmas MILLER we are pleased to publish an excellent portrait, from a recent photograph, of the late poet laureate. His poem, "The Miller's Daughter," is a contribution in every way worthy of its gifted author. Space will not permit of its republication in full in these pages, but are not the words, and the thought, that run through the whole poem, familiar to every miller? Introducing the subject in these words:

I see the wealthy miller yet,
His double chin, his portly size,
And who that knew him could forget
The busy wrinkles round his eyes?
The slow, wise smile that round about
His dusty forehead drily curled,
Seemed half within and half without,
And full of dealings with the world.

And, following on to the central thought of the poem, Tennyson bursts out in the following lyric verses, which have been quoted over and over again in miller literature, and which gives special significance to the entire poem:

It is the miller's daughter,
And she is grown so dear, so dear,
That I would be the jewel
That trembles at her ear:
For, hid in ringlets day and night,
I'd touch her neck so warm and white.

And I would he the girdle
About her dainty, dainty waist,
And her heart would beat against me,
In sorrow and in rest:
And I should know if it beat right,
I'd clasp it round so close and tight.

And I would be the necklace,
And all day long to fall and rise
Upon her balmy bosom,
With her laughter or her sighs,
And I would lie so light, so light,
I scarce should be unclasped at night.

Charles Mackay, an English poet, who has been widely read, is the author of those well-known verses, "The Miller of the Dee," which have been memorized by scores of school boys, and are to be found among the selections in the public school readers in use in the schools of this province. The happy, contented nature, with which the miller is credited, is brought out by Mackay in these lines:

There dwelt a miller hale and bold
Beside the river Dee;
He worked and sang from morn to night,
No lark more blithe than he.
And this the burden of his song
Forever used to be,—
"I envy nobody—no, not I,
And nobody envies me!"

"Thou'rt wrong my friend!" said old King Hal,
"Thou'rt wrong as wrong can be;
For, could my heart be light as thine,
I'd gladly change with thee.
And tell me now what makes thee sing,
With voice so loud and free,
While I am sad, though I'm a king,
Beside the river Dee?"

The miller smiled and doffed his cap;
"I earn my bread," quoth he;
"I love my wife, I love my friend,
I love my children three;
I owe no penny I cannot pay;
I thank the river Dee,
That turns the mill, that grinds the corn,
To feed my babes and me."

"Good friend," said Hal, and sighed the while,
"Farewell! and happy be;
But say no more, if thou'dst be true,
That no one envies thee.
Thy mealy cap is worth my crown,
Thy mill my kingdom's fee!
Such men as thou are England's boast,
O miller of the Dee!"

What parent has not heard the youngsters rattle off in their childish way the story of the good time spent with the miller when the frosts of winter had frozen over the stream and compelled the closing down of the mill. The picture is of old-time milling, but it is not an unpleasing remembrance of past days:

The miller's little boys and girls
Are glad to see the snow;
"Good father, play with us to-day;
You cannot work, you know.

"We will be the mill-stones,
And you shall be the wheel;
We'll pelt each other with the snow,
And it shall be the meal."

Oh, heartily the miller's wife
Is laughing at the door;
She never saw the miller work
So merrily before.

"Bravely done, my little lads!
Rouse up the lazy wheel!
For money comes but slowly in
When snow-flakes are the meal."

* * * *

The poet, more than the essayist or novelist, has found the germ of frequent contributions to literature, in the rustic mill and its inhabitants. One of the cleverest, however, of the many clever books, written by George Elliot, is the "Mill on the Floss," a story of the old "Dorlcote Mill." Having described how lovely the little river Floss is with its dark, changing wavelets, the novelist proceeds to tell of Dorlcote Mill:—

"As I look at the full stream, the vivid grass, the delicate bright-green powder softening the outline of the great trunks and branches that gleam from under the purple boughs, I am in love with moistness, and envy the white ducks that are dipping their heads far into the water here among the withes, unmindful of the awkward appearance they make in the drier world above. The rush of the water and the booming of the mill bring a dreamy deafness, which seems to heighten the peacefulness of the scene. They are like a great curtain of sound, shutting one out from the world beyond. And now there is the thunder of the huge covered wagon, coming home with sacks of grain. That honest wagoner is thinking of his dinner, getting sadly dry in the oven at this late hour; but he will not touch it till he has fed his horses—the strong, submissive, meek-eyed beasts, who, I fancy, are looking mild reproach at him from between their blinkers, that he should crack his whip at them in that awful manner, as if they needed the hint. . . . . Now I can turn my eyes toward the mill again, and watch the unresisting wheel sending out its diamond jets of water. That little girl is watching it too; she has been standing on just the same spot on the edge of the water ever since I paused on the bridge. And that queer white cur with the brown ear seems to be leaping and barking in ineffectual remonstrance with the wheel; perhaps he is jealous because his play fellow in the beaver bonnet is so rapt in its movement. It is time the little play fellow went in, I think; and there is a very hright fire to tempt her; the red light shines out under the deepening gray of the sky. It is time, too, for me to leave off resting my arms on the cold stone of this bridge. Ah! my arms are really benumbed. I have been pressing my elbows on the arms of my chair, and dreaming that I was standing on the bridge in front of Dorlcote Mill, as it looked one February afternoon many years ago."

* * * *

In the current literature of the day there is a plentiful supply of milling poetry, some good and much that is indifferent. Not a little, however, of that which is floating through the press, if not of the highest order of poetry, rather of the rhymist order, is yet healthful in tone and reflects the happy, hearty side of the miller's life. The miller, like other mortals, has his ups and downs, but it is creditable to his good sense that he does not carry his troubles on his sleeve, that birds may peck at them.

The miller himself, while making no pretentions to literary abilities above the average of his fellow men, may yet feel gratified with the position he has occupied in literature. He has wisely followed the plan of sticking steadily to his business; and yet those millers who have made time, outside of their daily routine, to put pen to paper, have developed a thoughtfulness and facility in writing that has done credit to themselves and the various journals in which their contributions have been published.

THE FIRST TEARS.

A CHRISTMAS STORY.

HE was tall and rough-looking, and moved along the crowded streets with the heavy, awkward gait of a hard-working man. The ill-fitting ready-made clothes he wore contrasted strangely with his intelligent face, to which the stern lines of a sorrow borne with manliness gave additional dignity.

There was a narrow band of crape around his hat.

A stout old lady ran against him at the street corner and dropped an armful of bundles and packages. He assisted her in picking them up, and as he handed her the last one, through the torn wrapping paper whereof protruded the head and the arm of a cheap doll, his hand trembled.

The red-faced woman was busy catching her breath, and hurried on without thanking him for his trouble.

Slight as the incident was, it reminded him that it was near Christmas time.

The corners of his mouth began to twitch.

Last year he had proudly laid a neat gray shawl on the Christmas table, and had pinned to it a little card whereupon the shipping clerk of the factory, who wrote a nice, flourishing hand, had written for him, "To my good wife, Mary."

And beside this he had placed the doll and a pair of warm mittens and a picture book for their little girl.

And then he thought of the two bright tears of joy that had sparkled in his wife's eyes when, after her first pleased surprise she had turned around, and laying her arms around his neck, had called him, amid smiles and sobs, her "dear, silly old Dick."

But Mary and the curly-haired tot that had danced so gleefully around last year's Christmas tree were sleeping side by side in the silent God's acre.

There arose before him the vision of a gray November day, a pitifully short funeral procession, a hurried sermon by the minister over two plain coffins, and then the awful thud, thud of the earth heaped upon dust that had returned to dust.

A big lump rose in his throat, but his eyes stared tearlessly before him.

A servant girl leading two children passed by him. The little ones prattled baby talk in the high key common among children, and loud enough for the bereaved workman to hear.

Like the echo of an old song the notes fell upon his ear, pleasing and yet so immeasurably sad to him.

Ah; if he could give vent to his grief—could weep a single tear!

Mechanically he entered one of the large stores, and without knowing how he came there he found himself in front of the very counter where last year he had bought the doll for his little daughter.

From those displayed he now selected the largest and most elaborately dressed one.

He knew not, nor thought he, what to do with it, except that he had an indistinct idea of placing it upon the child's grave on Christmas Day.

The clerk, a smart, businesslike young woman with glasses on her tip-tilted nose, looked dubiously from the expensive purchase to the poorly dressed customer, and ventured to say, "This is six dollars. Do you really want to buy it?"

In answer he handed her a ten-dollar bill.

She gave the doll to a little cash girl, who admiringly smoothed down the silken hair and flaxen dress with affectionate tenderness, while the clerk made out the cash slip.

The man looked down upon the little one and asked: "Say, sissy, wouldn't you like to have a doll like that?"

She looked at him quickly with an expression that began with enthusiasm and joy, and finished with tearful eyes and a half-sob, for she thought he was making fun of her.

She scampered away, and presently returned with the neatly wrapped parcel and with the change.

The customer carefully placed the money in his purse, and then, as he turned toward the stairway, he dumped the doll into the arms of the astonished little girl, hurriedly said, "Here, sissy, here's your Christmas," and walked rapidly away.

When the little girl had recovered sufficiently from her surprise she ran after him and caught him on the stairs.

She had the advantage over him in being two steps above him, and she put her little arms affectionately around his neck, and as he turned she kissed him squarely on the mouth.

He took her face in both his hands, looked for a moment straight into her blue eyes that sparkled with delight and gratitude, and kissed her on each cheek.

As he walked away the tears flowed from his eyes for the first time since Mary and the baby had died.

[For the Miller's Christmas.]

THE JOLLY MILLER.

HE was a jolly miller,
Who stood at his mill door;
He had "dead loads" of siller,
But still he wanted more.
And then he ad-ver-tis-ed
That he could take more biz;
And so you're not sur-pris-ed
That a happy heart was his—
For he had done just what he ought 'er have done;
And running a mill was to him nought but fun.

The trade and other papers
He diligently read;
The market cut no capers
That made him "lose his head";
He kept on ad-ver-tis-ing
What the people wished to know,
And so it's not sur-pris-ing
His "bread was never dough."
To wants of the people he gave strictest heed;
He always could furnish what all people knead.

He was a dusty miller,
But dustless were his bins;
By the use of insect powder
No flies was in his tins;
And his local ad-ver-tis-ing
Was so neatly "written up"
His flour was always "rising"
And o'erflowing was his cup,
For on his many patrons he had such a goodly "clutch"
No other millers caught them, though they tried so very much.

He was a genteel miller,
For "polishers" he used;
Of society a pillar,
Many chances he'd refused.
His wife was most en-tran-cing,
His children never "sour";
And skill was aye en-han-cing
The value of his flour.
So don't wonder at all that he was a fat man;
All men might grow fat who followed his plan.

I sing this song to others;
Tho' thin, or short, or tall,
You're the Jolly Miller's brothers—
You may be jolly all.
Keep a watch on ad-ver-tis-ing—
Your own and others' too;
And it will be sur-pris-ing
How much more trade you'll do;
Just do as he did—what you ought 'er have done—
And running your mill will be nothing but fun. —T. B.

ANTISTHENES AND THE BOASTFUL YOUTH.

THERE is an old saying that we should not count our chickens before they are hatched, which is a very good old saying indeed, and one that has been said in many different ways. One of the most amusing ways of putting it was that of the Greek Antisthenes, who had been very much wearied by the boasting of a young acquaintance of his of how rich he would be when a cargo of salt fish he was expecting arrived from the Pontus. The youth kept telling Antisthenes of the presents he would give him and other attentions he would shower upon him, when the Greek seized an empty meal-bag, and led the braggart to a dealer in flour.

"Fill this to the brim," he said to the dealer. The dealer did so, and Antisthenes, turning on his heel, started to leave the shop without paying for the flour.

"Here!" cried the dealer, "my money! my money!"

"Ah!" said Antisthenes, "I have none; but this young gentleman" (pointing to the boastful youth) "will pay for it when his cargo of salt fish comes in."

The haste of the dealer to empty the flour back into the bin and hurl the empty bag at the retreating Antisthenes taught the young man the lesson the wit desired him to learn.

AN EPITAPH.

Beneath this stone a miller lies,
Who left the world before the rise
Of modern ways of making flour,
And hence passed many a happy hour.
He was not forced to speculate,
Nor on Chicago's movements wait;
He did not care for foreign trade,
But sold his neighbors all he made.
Cables and telegrams were rare—
The markets did not make him swear;
Small was his mill, his profits round;
Clear was his head, his slumbers sound.
He envied none, was envied not,
And died contented with his lot.

ANOTHER.

Here lies, poor soul, a tired man—
A miller on the modern plan.
He was not born to rest content
With modest mill and life well spent.
Great was his output—near and far
He sold his product by the car;
Sought over seas the golden store
That once he garnered at his door.
By speculators vexed and worried,
Thro' life's brief span his course was hurried,
Until on earth no rest he found,
And gladly sought it underground.

CHRISTMAS TRADITIONS.

MANY pleasant customs of the holiday are derived from ancient superstitions, and have just enough of the old flavor about them to add zest to their observance without interfering at all with the Christian spirit of the occasion. Two of these are the following: It was an old English superstition that on Christmas Eve the oxen were always found on their knees, as in an attitude of devotion. This was derived from the notion that an ox and ass present at the Nativity assumed the suppliant position. The idea is embodied in prints that come to us from the sixteenth century. The common custom of decking the houses and churches at Christmas with evergreens is derived from ancient Druid practices. It was an old belief that sylvan spirits might flock to the evergreens and remain unnipped by frost until a milder season. The holly, ivy, rosemary, bay, laurel and mistletoe were the favorite trees.

THE ORIGIN OF XMAS.

HAVE you ever wondered about the origin of the word Xmas? It has been thus explained: Many people suppose that the X in the Xmas represents the cross, and wonder that it was not written †mas. The X, however, has nothing to do with the cross. It is the Greek letter "Chi," corresponding to ch in our language, and is the initial letter in the Greek name of Christ. The words Christ mass were written X mass long before Christmas became one word.

BUSINESS MENTION.

The illustrations of Montreal and Quebec, on pages 20 and 21 of The Miller's Christmas, were kindly furnished us by Mr. P. J. Slatter, Pass. Agent of the Grand Trunk Ry., Toronto.

THE Canadian Rubber Co., of Montreal, Que., with their western branch at Toronto, under the able management of Mr. J. H. Walker, needs no introduction to MILLER readers. Their advt. on Christmas cover will, however, attract attention.

A SALE of $50,000 worth of leather belting to one miller is a business transaction to be valued and is a high compliment to the manufacturer of the belting. Such a sale was made to Mr. W. W. Ogilvie, during the remodelling of his six mills, by Robin & Sadler, of Montreal. The firm's advt. is on page 20.

THE importance of a thorough business education to any man or woman contemplating a business career does not need to be emphasized in these columns. To such, the advertisement, in another column, of Shaw & Elliot, proprietors of the Central Business College, Toronto, will be read with interest.

[For The Miller's Christmas.]

LEFT BEHIND.

BY KATE WESTLAKE YEIGH.

"LIE down again, father. It's too early to get up. It's hardly six o'clock, and this is Christmas morning."

"Chris'mas morn, is it? So 'tis, so 'tis. But I heard teams drivin' 'long down the hill and over the bridge to the mill, and I must be stirrin'."

"No, father, no. Nobody would come to the mill on Christmas morning."

"No? No, I s'pose not. No one ever comes to the mill in the early mornin'—now."

narrow, many-paned sash, which Frost's dainty brush had painted with Arctic scenery, with gems and diadems, with flimsy tracery of lace-work, with skeleton ferns and fairy flowers and grasses. The flaming posies of the wall-paper looked like the shadow of petrified blossoms thrown against a winding-sheet. The high-backed wooden chairs seemed like grim sentinels, dead at their posts. The tall, straight dresser with its tiny swinging glass, the home-made washstand in its muslin drapery, the high, round posts of the great, old-fashioned, corded bed, with its valance and knotted counterpane, all made up a picture intangible, unreal, "like a dream when one awaketh."

"Christmas: Christmas morning!" I sighed restlessly, as I thought of the many happy Christmastides I had spent among my loved ones, and of the strange chance—it seemed like chance—that had brought me to the old mill house on Christmas eve; the old mill house where, many years before, I had spent many a joyous summer hour.

It had been late the night before when I had dropped

was a steep, rugged hill, bare of tree or shrub. Beside the mill stretched a long line of sheds—sheds that, in the good old days before railways and roller process came to divert trade from the old mill, used to shelter farmers and their teams when they came to the mill with their grists.

Just above the sheds, and apparently sinking into the frozen bosom of the pond close by the dam, lay the pale sickle of a waning moon—too weak in its last frail movements to do more than render ghastly the first soft flush of dawn that was heralding in the day of "peace and good-will."

At breakfast I took a good look at Emily, the miller's daughter—Emily, with her bright cheery voice that said welcome in its every tone—Emily, with her cheeks thinner than they used to be and a bright red spot away up toward the hollow, blue-veined temple—Emily, with a pathetic droop to her pretty mouth and a deeply marked line that ran into the valley that used to be a dimple, and a cough that racked her shrinking chest and made her explain that "something irritated her

Beside the Mill-Wheel in the Stream.

There was a sad hopeless tone in the quietly-uttered "now" that told its story all too well to me, as, awakened by the sound of voices that came to me through the thin partition, I had been listening drowsily to the conversation.

I heard the old man's slow, shuffling tread, as he passed my door and re-entered his chamber, that was next my own. I heard a door across the hall closed gently, but the creaking floor and a sound of quiet movement told me the miller's daughter was not going back to her broken slumber. The straining of cords and a stifled groan, followed by a long-drawn sigh, spoke plainly of the old man's rheumatic body seeking its disturbed repose, and I turned over to have another nap myself.

But sleep would not come.

Thoughts crowded thick upon me, and my eyelids would not keep shut.

My eyes wandered idly about the room, seeing only dimly the unaccustomed furniture. A strange ghostly light crept through the unshrouded window, with its

in upon my old friends, a dark night hiding from me everything that was familiar except the dim outline of the old mill that rose square and black beyond the little yard.

Thinking of the dear old mill and its whirring water wheel I rose, and, leaving my nest among the feathers, stepped out upon the floor. Ugh, how cold it was! A country guest-chamber where no breath of fire could reach even in day-time from the little parlor wood stove or the cook stove in the raftered kitchen.

Shiveringly I went to the window and, through a space unfrescoed by the frost, looked out.

Out across the yard with its snow-covered bushes rose the great wooden mill, weather-stained, unpainted, silent. High up, level with its third story windows, white with flour inside as its ledges were with snow, I could see the mill-race with giant icicles outlining its black length. House and mill were built in a hollow, a valley, and the pond, from which the power came, lay far up above us, while above the pond, and rising sheer from the mill waste-way at the foot of the little yard,

throat this morning."

She seemed all bound up in her father.

She anticipated his wants with a loving care that was more than tender; and when he rose from the table saying, "Emily I must go, I hear a team," the way she watched his feeble, uncertain steps as he went out of the door and down the path to the old mill was more than motherly—it had in its brooding love a look of pitying veneration such as I had never seen.

"He is all I have," she said simply in answer to my look, "and he has nothing left but me."

"He's been so well this winter," she said cheerily in answer to my questioning. "And we get along. I have so much time, I do a little sewing to fill in my spare hours. Father gets about, he has not missed a day going down to the old mill and though he's frail you'd be surprised what he can do. Last year he had a stroke—after the fall—and then the rheumatism—the rheumatism cripples him, and he suffers so, but he keeps up and is cheerful and patient, as you see."

"After the fall," I knew what that meant—after the

beauty of the family, the best beloved of all, the baby, wilful, impetuous, unrestrained, and only nineteen, had hidden her burden of sorrow and shame in the depths of the pond up beyond the mill.

Busy, prosperous, happy, and wealthy for those days, had been the miller and his family when the country was younger and all the grist of the district came to the mill to be ground. There was the mother—dead now these fifteen years—I could see her yet surrounded by her seven children, all so strong and full of life; and the miller—not a man in all that section could hoist to his shoulder such a load as he.

Ned was a farmer. He married, and his widow keeps a little store in the village to this day. And Grace was drowned while bathing, and Tom—Tom was the wild one who went west—he's now a magistrate. Millie married a minister, a Methodist minister, he's stationed—well, no matter where, he moves so often. And poor, clever Ben, so smart at school, he was to have been a lawyer—and no doubt a judge—he grew weak and ill and his mind went. He's strong and hearty now but there's no hope, or so they say at the asylum. And little Allie, disgraced, a suicide—and Emily, who loved them all so dearly, talks calmly and hopefully to me as she prepares to cook the Christmas dinner.

After a little I joined the old man out in the deserted mill where the uneven flooring spoke of the passage of feet, the echo of whose tread should be heard there never more.

The miller with his shaking hands, all knotted and swollen with rheumatism, was thumbing idly his ink-stained, moldy ledger and looking out through a little window that commanded a view of the empty sheds.

"Time was," the old man said reflectingly, "when them sheds woulden begin to cover the teams that came here, day in, day out. Now'n ag'in there'll be one now, just now'n ag'in, 'nough to keep me and Emily, but it's nothin' a tall, just nothin' a tall."

He paused and raised his head in an attitude of intent listening and I was quite prepared for the question, "Don't you hear a team crossing the bridge?"

I said, "I hear nothing," and then to divert him asked, "How does Emily get along? Does she keep well?"

"Emily? Oh, yes, Emily's always well. She's rare and strong, is Emily. Never complains, never gets tired, does her work right cheery. Wish I was as well as Emily—I'm not the man I was, nothin' like the man I was."

"I thought Emily was to have been married," I ventured.

"So she was, so she was. A well-to-do farmer on the Lake-Shore road. Well-to-do and fond of her as could be, and she fair worshipped him—or seemed to. The day was set—'round about the fall a year ago it was—but somethin' happened, some—thin'—happened, I don't rightly mind what," ruffling up his scant, white locks and looking distressed. "I think I was sick. Yes, that was it. I was down with fever and was never the same man ag'in, and she put him off and off—she woulden leave me. And you see his sister that had kep' house for him had got married and not havin' no woman-folk he wanted a wife—and he got huffed with Em'ly and married another girl. But Em'ly never cared. Nothin' goes very deep with Em'ly, she's so easy-tempered. She's rare and cheery—nothin' ever bothers Em'ly. Hark! I hear bells. There's a team comin' over the hill."

"No, it's nothing. It's only the wind," I said soothingly.

"It's never teams, and yet I hear 'em always. I hear 'em in the night and rise, but Em'ly always hears me and says, 'It's only the wind. Go back to bed ag'in, father.' I'm hearin' 'em always, always. Times has changed, times has changed. The teams has all gone by me. I'm old-fashioned; I'm behind the times; everythin' 's gone by me and I'm left behind."

"Left behind," out-run, left behind in life's race.

* * * * * * * *

Another Christmas found the old mill more weather-beaten. more desolate, more ghost-like; and the old miller a little feebler, a little more shrunken and stooped, but still listening, always listening for the teams that never came; found him more deserted, more alone, though cared for through the agency of wild Tom, his son, the magistrate out west. He had been "left behind" even by Emily—Emily who was "always cheery," Emily who was "easy-tempered" and "never bothered," Emily who had died alone one night, and was listening now up above to the herald angels' song, "Peace on earth, goodwill to men."

TORONTO.

CHRISTMAS IN NORWAY.

AT Christiania, and in other Norwegian towns there is a delicate Christmas way of offering to a lady a brooch, or a pair of earrings, in a truss of hay. The house door of the person complimented is pushed open, and there is thrown into the house a truss of hay or straw, a sheaf of corn or bag of chaff. In some part of this "bottle of hay" envelope there is a "needle" of a present to be hunted for. A friend received from her betrothed, according to this Christmas custom, an exceedingly large brown paper parcel, with a loving motto on the cover. And so on, parcel within parcel, motto within motto, till the kernel of his paper husk—which was at length discovered to be a delicate piece of minute jewelry—was arrived at.

One of the prettiest of Christmas customs is the Norwegian practice of giving on Christmas Day a dinner to the birds. On Christmas morning every gable, gate-way or barn door is decorated with a sheaf of corn, fixed on the top of a tall pole, wherefrom it is intended that the birds shall make their Christmas dinner. Even the peasant will contrive to have a handful set for this purpose; and what the birds do not eat on Christmas Day remains for them to finish at their leisure through the winter.

VEGETABLE TURKEYS.

CHRISTMAS, as known to English-speaking people, is a Northern festival. We have it still associated with the ancient Yule-tide, with frost and snow out of doors, and the fire of ash logs within. In southern latitudes, where December is the midsummer season, English people feel lost at the Christmas gatherings. Canadians would be reminded of the First of July.

Even on this side of the equator, Christmas loses somewhat of its charm in warmer climates. English residents of India often remark upon the lack of all outdoor surroundings to inspire seasonable feelings. The Hindoos keep turkeys, however, and have found out what an important part they play in celebrating days of generous giving and generous living. The wife of a civil officer in India tells how the natives follow English customs:

"The principal feature of Christmas Day is the swarms of natives who come to make their salaam to my husband, beginning early in the morning and going on till noon. They all bring offerings, too, which it is a disgrace to them to have refused, and the hall is piled with trays of sweetmeats, fruit, toys, and anything they venture to offer.

"It is forbidden to offer anything but fruit and vegetables, but the devices they resort to in order to evade this are very amusing. Along with other things, two turkeys were marched in as one man's offering. Robert looked displeased, and said he could not accept such things, whereupon the man pleaded earnestly that they were "vegetable" turkeys. It was impossible to resist this, but Robert told him that in future even vegetable turkeys could not be allowed.

'At present these singular birds are stalking about the ground, gobbling wonderfully like common turkeys."

A CHRISTMAS CHIME.

At Christmas time, from clime to clime,
Each star to star doth sweetly chime
Till all the heavens are ringed with rhyme.

Then, loosed above, a note thereof
Floats downward like a wandering dove,
And all the world is ringed with love.

CAROL.

What sweeter music can we bring
Than a carol, for to sing
The birth of this our heavenly King?
Awake the voice; awake the string?
Heart, ear and eye, and everything.

[For The Miller's Christmas.]

MIDNIGHT BELLS.

BY LLEWELLYN A. MORRISON.

RING, but ring softly, sweet bells, in your pealing!
Whisper your requiem cadences low;
Tenderly, kindly, your pity revealing—
Breathing your peace upon mortals below.

Ring for the old year now fading and dying!
Sunbeams have kissed the last gleam of his smiles;
Swiftly the record-fraught moments are flying
Afar with their brides to Eternity's files.

Hopes that beat high when the morning was shining,
Trusting the future for weal and reward,
Find all their brightness enshadowed, declining—
"Not now, but afterward," thus saith the Lord.

Loves that were true and gave promise of blessing,
Making the earth a fair Eden of joy,
Now in the gloaming, with venom distressing,
Live but to harass, confuse and annoy.

Friends, on whose life and heart-love we were leaning,
Meanwhile have left us to follow alone,
Passing beyond the dark veil intervening
Into where parting and pain are unknown.

Ring, but ring softly; nay, cease, for 'tis ended!
The sorrow-swept passage is over and done;
The Present we loved with the Bygone is blended,
The Future we feared has already begun.

Toll for the dead! May Jehovah receive them
Silently, peacefully into His trust:
Low in His own judgment-waiting room leave them—
"Ashes to ashes" and "dust unto dust."

Peal out for the new-born with glad jubilations!
And ring back from belfry and minaret high!
This ONE, the sanctified hope of the nations,
By grace is immortal, by faith shall not die.

The Truth, long enchained in the dungeons of Error,
Hath promise of unfettered freedom at last;
And Right, out of Might's dark enslavement of terror,
See's Liberty rise, disenthrall'd of the Past,

With crowns for the "henchmen" whom freedom baptizes
To sever the shackles that bind men in sin,
While high, through the mind of the mortal, arises
The brightness that heralds Eternity in.

So peal out thy prayer! 'Tis Jehovah's good pleasure.
Thy chime should ring greeting and call for the day
When Love, like its Source, shall have limitless measure,
And Christ, its Completion, is Monarch for aye,

CHRISTMAS LONG AGO.

BY "BOB" BURDETTE.

MOST of the Christmas presents in those days were designed by the manufacturers for the hanging stocking, writes Robert J. Burdette in the Christmas number of the Ladies' Home Journal. Anything too big to go into a stocking had to go over to somebody's birthday. In one family where there was more than one child, the old reliable "Noah's Ark" was always looked for. We hailed with acclamations of astonished recognition, Noah and Mrs. Noah, Messieurs and Mesdames Shem, Ham and Japhet. There was no way of telling the men and women apart; they were exactly alike; but the elephant and giraffe you could distinguish at a glance, on account of the spots on the giraffe. So also the dog and the cow; because the cow was always white and blue, while the dog was invariably plain blue. Within twenty-four hours after the landing on Ararat, the baby would have all the paint sucked off Shem, Ham and the hired man, and the doctor would be sent for.

The red monkey climbing the red stick was another regular Christmas visitor. He was highly esteemed as a light luncheon by the baby. It never seemed to affect the infant unpleasantly, to himself that is; although the cloudy symphony in red and blue about his mouth was apt to make the beholder shiver. But it made the monkey look sick. Then there was a soldier on a box, with a major-general's uniform, beating a drum. You turned a crank, the general lifted his sticks high in the air, and something in the box made a noise as much like a drum as a peal of thunder is like a piccolo. These things as toys were of no great value, but as practical and useful object lessons they were beyond all price, on the minus side.

[For the Miller's Christmas.]

MY CHUM CHARLIE.

BY JOHN BROWN.

YOU do not know Charlie? Well, if you do not you ought to, for Charlie is one of the best of all the good fellows that I know, so I will just make you acquainted with him. Charlie O'Redmond is not what you would just at first sight denominate handsome, but if ever you travel with him as long as I have you will come to the conclusion that he is better looking inside than out. Of medium height, he is built like an athlete—and in fact he considers himself such—with a sunny smile shining out of the palest of light blue eyes, with golden hair "a little thin on top," and a broad, honest face, which at times is slightly inclined to be florid. Charlie is a model of a young sprig of the Emerald Isle, who has been drafted into service in the great army of drummers. Like all drummers, and particularly those whose Celtic blood renders them more liable to the disease, my chum Charlie was particularly fond of a joke, and, it must be acknowledged, not always and altogether too merciful in carrying it out, and not infrequently were the tables turned on himself by those who at one time or another had been his victims.

We had travelled together for some weeks during the month of July, 1890, through the beautiful fields of Manitoba, and what with eating and sleeping together, and with an adventure now and then with a broncho team or a lost trail on a dark night, we had grown to be very intimate, and Charlie, one night in the midst of a terrible thunder storm on the prairie, confided to me the fact that he was rather more than deeply interested in a certain young lady in Winnipeg, who was at once his torment and his joy. I, of course, sympathized with the dear boy, as I could tell pretty accurately how that sort of thing felt myself; but what for the moment interested me more than the tender recollections of Charlie O'Redmond, Esq., was the fact that at every flash of lightning the said Charlie was in the habit of ducking his head and covering his eyes—a circumstance of which mental note was taken for future reference. After a few weeks more of sojourn in hotels where we had the option of tough mutton or "mate," together with invitations that "if we did not like the accommodation within we could sleep on the roof," we returned to civilization and a first-class hotel in the Prairie City. Of course, I was introduced to the future Mrs. Charlie, and judge of my surprise to meet an old friend and, I might almost say, playmate.

Now, if Nellie O'Hara be a crank—if the term be applicable to the most engaging of young ladies—she certainly is one with regard to Free Masonry, and she expressed herself so decidedly upon the subject that Charlie took an immediate determination that he would be initiated into the deep and dreadful mysteries of the Craft. Of course, having passed through the agonies of utter darkness and despair in order that I might approach the light that illumines the world, I could not refuse to offer my assistance and advice to my dearest chum; so upon the morrow, having visited several others who were also members (?) of the mystic circle, the papers were obtained and the application filled out in due form and everything ready for the initiation.

Toward the evening when Charlie's fate was to be decided, it was noticed that a shadow of sadness seemed to cross his beaming countenance, and Roddy McCross said, with a grim smile on his saturnine countenance, that if it were not for Nellie, Charlie would not endure the ordeal. However, punctually at the time appointed, he approached the lodge-room and was politely received by the tyler, who escorted him into the cosy little waiting-room and no time was lost in preparing the candidate for initiation. He was introduced into a little box in the wall and instructed in what was required of him; then, after being blind-folded, he was led into what seemed an interminable space. Suddenly a distant roar was heard, then another; then nearer and nearer came the dreadful sound, until in his excited imagination the candidate felt the building rocking and swaying, and even in his darkened eyes seemed to flash the dreaded lightning; then with a cry of terror he turned as if to fly, but whither? and how? Blindfolded and manacled hand and foot, he stood, the picture of abject misery, when suddenly a cold and clammy hand was placed in his, and he shuddered as if he felt no living guide was his, and a solemn voice whispered in his ear, "Advance, mortal, and visit the caves where lie the remains of all those who have proved unfaithful to our secret vows, and learn thou to be humble and obedient." With trembling knees and mind agitated with the horror of his situation he advanced, the dead hand still leading him on down rugged stairs, through passages reeking with damp, every now and then striking the jagged angle of a rock, he toiled along, then suddenly surrounded by a host of the companions of the dead, he was jostled hurriedly along, nor did it tend to smooth his fears that his awful guide kept continuously filling his ears with warnings and advice.

At last, arriving at what seemed to be the end of their journey, a strain of music, low, solemn and weird, seemed to come forth as if from the future, and swelling and dying away, reminded him of a dirge.

Dragged, rather than walking, he stumbled a few steps, when the mandate came, from one who apparently acted as chief, to seat him in the chair of death, which was accordingly done; then when the order, "Brethren, be seated at our ghostly feast," a sound of moving spirits was heard, and at the command of the same austere voice the bandages were torn from his eyes, and to his surprise he found himself seated comfortably at the head of the table in Nellie's own home, surrounded by his chums, but judge of his horror when, looking into a full sized glass which was carefully placed opposite him, he saw the figure which was exhibited—an old maid's cap and strings for head-gear; a prison coat of two colors, ragged and tattered and navvy's boots surmounted by overalls—his dress was as incongruous as it was artistic at a dinner party, but worst of all Nellie was laughing until the tears ran down her lovely face as, standing up, she drank the toast, "Our New-Made Brother."

A CHAUDIERE MILLING INDUSTRY.

DURING some months past the McKay Milling Co., of Ottawa, Ont., has been remodelling, enlarging and equipping their extensive mills at the Chaudiere. The work was entrusted to the Edward P. Allis Co., of Milwaukee, Minn., their head millwright, Mr. Anderson, superintending the alterations. This company supplied the plans and programme. The North American Mill Building Co., of Stratford, Ont., have furnished the bulk of the machinery made from plans of the Allis company, and now the mill is the only one in the Dominion fitted on the Allis Duplex system. The rolls themselves came from Ansonia, Conn. The alterations have doubled the capacity of the mills, giving an output of 700 barrels a day, requiring 3,000 bushels of wheat.

The first floor is the packing floor. Here are two Barnard & Leas feed packers made in Moline, Ill., and a jewel small sack packer made in Silver Creek, N.Y. From this floor all the goods packed are by means of a carrier taken across under the bridge supporting the roadway to Hull to the new storehouses opposite

On the second floor are twenty-nine double sets of rolls of the Gray's noiseless belt rolls pattern, also five packers. In the adjoining building on the same floor are a number of Howe's separators and scourers, made at Silver Creek, N.Y., and considered the finest machines of their class manufactured.

The third floor is the bin floor. Here are five bins holding flour over the packers, and two Reliance centrifugal dust collectors made by the North American Mill Building Co. There are also two wheat bins, three Reliance middlings purifiers with air belt attachment (made at Stratford from designs by the Allis Co.), and two roll suction fans.

On the fourth floor are fifteen Gray's round reels, twelve Gray's centrifugal reels, two Little Wonder reels, one Goldie & McCulloch reel, eight Reliance purifiers, three air purifiers and two Gray's round scalpers.

The fifth floor contains eighteen Gray's round reels, two Jonathan Mills round reels, seven Gray's centrifugal reels, two Goldie & McCulloch centrifugal reels, six Gray's round scalpers, ten Gray's air purifiers, and three Gray's silver purifiers. This is the top storey of the mill, and it is evidently a most complete double mill. All the packing machines are fitted with Durant's tally for recording the number of bags filled.

The process of filling is most interesting. Opposite the filler stands a man, who from a pile of sacks on his right hand takes one, which fits round the mouth of the large filler tube. As the sack fills a rest at the bottom lowers with the weight until the sack is filled. A lever stops the filling at the right moment, the sack is lifted off on to scales and weighed, then sewn and sent away to the carrier for storage.

The firm have in connection with the new improvements, introduced a new system in Canada. Everything is sacked. Flour and oatmeal is sacked in sacks of 98 and 100 lbs. Feed is made up in 100 lb. sacks, oats in four bushel sacks and other grain in two bushel. The new store house is a frame building covered with iron, having a capacity of about 40,000 bags of flour, and connected with the mill by a carrier. The mill is lighted throughout by electricity, the dynamos, etc., being placed in a corner of the first floor. In the basement are located the three turbines which drive the mill, and the large boiler by which the whole building is heated by steam.

The managers of the company expect the mill will be steadily running night and day; from eighty to one hundred men being employed. In addition to the large flour business, the company has a specialty in oatmeal, their grades fetching the highest prices of any American or Canadian oatmeals in the European markets. They are doing a large and increasing trade with Great Britain. Special machinery has also been designed for the manufacture of rolled oats, which are now so generally and favorably known under the company's registered trade mark of "The K. Y. Rolled Oats."

PERSONAL.

Jas. Richardson, a leading grain dealer, of Kingston, Ont. died a few weeks since at the age of 73. He was the first man who exported grain from Kingston. He was an ex-alderman, a prominent conservative, and a liberal benefactor of Queen's University.

Mr. J. A. Younie, of Embro, Ont., proprietor of the large flour mills of that place, died suddenly on Nov. 29th. He bought the present mill property about eight years ago and had been very successful. He was fifty years of age and leaves a widow and three children to mourn his loss.

NEW PUBLICATIONS.

The flour and grain trade of Canada, as well as foreign importers of Canadian products, will welcome the publication of "The Canadian Shipping Manufacturer's List" by Mr. M. J. Henry, of Montreal, Que. The plan of the book is to be as follows: All articles of domestic manufacture in which a shipping business is done, will be arranged in an alphabetical list; this list will be an index to all the corresponding manufacturing concerns in the country, as under every entry will be grouped the names and addresses of all shipping manufacturers of the articles named. That is, the products will be classified on the basis of product. If he makes 50 articles he will be referred to 50 times. This ensures every manufacturer's accessibility to certain and easy reference. The thought of the buyer who goes to the book for information is the key that unlocks it, and the object of that thought is always a commodity. With distinct lines of inquiry along which to proceed, it is impossible for the intending buyer to miss the information he is after. The entries in the list will be accompanied by references of manufacturers, where such are inserted. The book will be bound in cloth, and will be a 7½ x 10 inch volume. It will be got up in first-class style, and will sell in all parts of Canada, Europe and America. Enumerators are now at work collecting the information, and contracts for advertisements are being received. Mr. Henry will gladly furnish information to all enquirers. His address is Box 465, Montreal, Que.

M. Loundsbury, Princeton, Ont: "The CANADIAN MILLER is well worth the money, and I always look forward to its coming with pleasure. Wish you every success in your laudable efforts to supply the millers of Canada with a good paper."

GRAIN IN OLDEN TIMES.

HISTORY proves that the very general use of vegetable food, in the form of the numerous cereal grains, has been one of the most potent factors in determining the settlement of the human race and in hastening the progress of civilization in centres of life and activity. The wandering savage can and does obtain his daily food by the use of his spear and arrow, but the natural increase of population has compelled him more and more to resort to the use of the supplies from the vegetable kingdom, which a virgin soil never failed to bring forth. The mythological lore of all nations is rich in references to the names of deities who came down from heaven to instruct man in the mysteries of agriculture. The growing of crops tied the grower to the ground which he cultivated; settlements thus made became villages and towns. There can not be a doubt that the dawn of agriculture, even in its rude forms, brought in its train the beginnings of civilization and culture. The knowledge of this ancient industry probably spread from central Asia to other lands. Those ancient colonizers, the Phœnicians, introduced agriculture wherever they went and were able by barter to exchange their manufactures for food. The Egyptians were, in the most ancient times, exporters of grain obtained from their soil, enriched periodically by the overflowings of the Nile. Probably from them the Greeks received their instruction in growing grain, and they are said to have grown barley and wheat largely. From the Greeks the Romans acquired a knowledge of agriculture, and in their conquering march over western Europe, while they devastated and laid waste wherever their victorious legions went, they at the same time introduced the practice of tillage, which they had acquired from their neighbors. Each soldier carried with him the grain for his daily food and a small hand-mill to grind it.

In the earliest periods the cereal seeds which form the raw material of the bread of to-day were eaten uncooked and, it may be, unground. Soon it was found advantageous to grind the grains, and this was done in wooden mortars by means of wooden stamps, and from this powder, mixed with water, a kind of paste was prepared, known to the Latins as "polenta" and "puls." It then became evident that the outward shell or bark was not a desirable constituent of the food thus prepared, and in order to affect the removal of this, as well as to promote easy grinding, the grain was slightly roasted by being laid among hot ashes or on a heated stone. At a very early period of history the advisability of a methodical separation of the husk and inner kernel of the grain became evident, as Pliny describes four different products obtained by grinding and sieving, under the following names:

Silligo.....	corresponding to our	finest flour.
Farina.....	" "	medium flour.
Farina Secundaria	" "	coarse flour.
Furfur..... ...	" "	bran.

The roasting and grinding of the grain was in those days the special task of the women and the slaves. Wooden mortars were soon replaced by stone mills, and criminal labor was often employed. The animals were yoked in the service of the miller, and shortly before the time of Augustus water-mills were used by the Romans. It is interesting to note the nature of the stone-mills used by the Pompeians, revealed during recent explorations. They consist of two stones, the bottom one being ball-shaped below and tapering upwards to a conical point; the upper stone is shaped like a tube which is contracted in the centre but widened out at each end. This latter stone is then inverted over the cone-shaped bottom and so fixed that there is only a slight space between the two, this space being regulated by an ingenious arrangement. The upper wide portion of the tube served as a spout into which to feed the grain which was to be ground. Here we have the embryo of our modern grinding-mills, rude but effective in those days.

It is easy to follow the development of the art of baking. The Athenians claim to have made the first wheaten bread and to have taught the art to the rest of mankind. In some eastern countries of the present day the requirements of life have been so primitive, from various causes, that of progress in the modern sense there has been none during periods of thousands of years. It was found that the thin mixture of flour and water, which for the time being served its purpose, would not keep for any length of time. More flour or less water being used, the consistence of dough was then reached, and it was discovered that if this dough were made up into cakes and baked a more palatable result was obtained and a bread which would keep indefinitely. The Greeks prepared these thin cakes from barley flour and called them "maza," the Roman name was "puls," and in the present day the Persians and Armenians make a similar cake in almost the same way. The thin cakes were placed in round pots, and the pot was either heated on hot ashes or a fire was built round it.

All this was bread prepared from unfermented dough, in which no special means for "lightening" the dough or making it spongy were adopted. There is no doubt that the mere heating of the cakes would give rise to the formation of bubbles of steam which would slightly expand the mass. The precise time when fermenting dough was first used for bread-making is unknown, but there can not be a doubt that some one of the primitive bakers who had unduly delayed the firing of his dough-made cakes found to his astonishment that he had produced a more porous, palatable and more digestible article. The discovery must have been almost as old as the art itself. Doubtless too often it was not the well-regulated alcoholic fermentation of the present bakery, but the undesirable acetous or acid one. Still it was a great stride towards improvement. The Greeks and Romans prepared a fermented bread from wheat flour, and their writings show that they recognized its sponging or lightening effects on the bread produced. The Greeks had many different names for evidently different kinds and qualities of bread. The Romans, on the other hand, seem to have been simpler in their tastes in this respect. The prototype of the pressed yeast of our times was a mass made from fermenting saccharine liquor thickened by the addition of bran and dried by the heat of the sun. When required for use a portion was softened in water, mixed with flour and then incorporated with the dough. The description in the Bible of the doings of the Israelites clearly shows that this ancient people was well acquainted with the use of "leaven," or barm, as they used both leavened and unleavened bread.

The first records of the establishment of bakeries intended for the manufacture of bread for public sale are dated A.D. 171, as some Greeks who had settled in Italy set up a public bakery. The wheaten bread made by the Athenians was considered by the gourmands of that time to be the best. It is specially to be noticed, even in very early days, that an almost exaggerated importance was laid on the necessity of cleanliness. The slaves on whom the manual labor devolved were compelled to wear gloves when kneading the dough, and even the mouth was to be covered by a bandage to prevent the breath of the kneader from coming into contact with the dough. Until the present century the offices of miller and baker were generally combined in one person, and even in the present day in many parts of the Continent this state of things still exists. During the middle ages the bakers formed a very important section of the working class of the community. In many countries they were formed into guilds or corporations, to whom very important privileges were conceded. On the other hand the exercise of their calling was controlled by numerous enactments, some of them highly necessary, others absurdly unsuitable. As an interesting example of the state of public opinion during the fifteenth century, in Nurnburg, in 1412, the Council condemned a baker for selling bread of short weight to the poor of that place to lose both his ears and his wife to lose one ear, both followed by banishment. Two of his apprentices each lost an ear, and a third was branded on the forehead by a hot iron. In 1771 any baker who sold bread of poor quality or of light weight, or who offended against the ordinances required to be observed by those in the trade, had his bread confiscated and himself fined for the first offence. In other places the offending baker was placed on a whipping-post, which was situated in the centre of a muddy pond, and could only free himself by leaping into the mud amid the hootings of the bystanders. In England bread made from oats and barley was the most common in early centuries. Charles I., in 1626, commanded that barley bread should be the bread of the common people.

CAUGHT IN THE GEARING.

BY T. W. GRAHAM.

"I LONG to know," cried Katie Moore,
"How flour is made so white and pure.
I'll wed the man who will explain
The secret that I would obtain."
A miller heard the maiden's threat
And vowed her wishes should be met,
That all the mysteries of the art,
To gain her hand he would impart.
He showed her first how wheat was cleaned
By passing o'er a shaking screen,
Which carried off the oats and straw
And sifted out fine dirt below;
Then dropping down a suction spout,
The wind drew chaff and light stuff out:
How smutters then complete the work
By beating off remaining dirt,
And scouring all the berries bright,
The air draft taking what is light;
For wheat, like men, is always found
Mixed good and bad, diseased and sound;
Impurities, however small,
Degrade, discolor products all;
No miller ever had the power
Without clean wheat to make good flour.
Thus moralized our miller friend,
And Katie did his words attend.
He then proceeded to explain
A roller mill receives the grain,
And through the crease the berries split,
(Not perfectly, he would admit,)
An elevator takes the meal
And dumps it in a scalping reel.
This reel is clothed with woven wire
Which sifts out all the germs of flour.
Some middlings also with them pass.
Another reel receives the mass,
Bolts out the flour and fine crease dirt,
(Which all the other flour would hurt).
The broken wheat again reduced,
More flour and middlings are produced,
Thus roll and scalper alternates—
One breaks, the other separates,
Till only bran is left intact,
(In theory but not in fact).
The purifiers then give aid
To dress the middlings that are made,
They travel o'er a silken sieve
That vibrates rapidly to give
Air rushing to a suction fan,
A chance to draw off fluff and bran,
And grade the middlings, large and small,
All ready for the burrs or roll,
To which they go to be reduced
That patent flour may be produced.
He showed her then the holting chests,
All clothed in silks, where flour is dressed.
This scene caused Katie's heart to swell—
He'd surely clothe a wife as well,
As those old reels revolving there,
With dust a-flying in the air!
Soon pleasant thought was turned to pain,
For her kind escort then began
To emphasize in phrases tall
His love for a centrifu-GAL.
But when she found 'twas a machine
Minus bustle, bangs or pin
Of which he spoke, her blushes came
To think that she had jealous been.
This only added to her charms;
Her lover seized her in his arms,
Regardless of her clothes or wishes,
And pressed her lips with straight grade kisses,
And swore that she must be his wife
Or low grade he should be for life.
This direful threat thrilled Katie's breast—
The miller's arm was round her waist;
Release could only be obtained
By promising while breath remained.
Besides her clothes were being soiled
By contact with her wooer bold;
So Katie to her lover said
On one condition she would wed,
Which was that he should not expect her
To always be his dust collector.

—American Miller.

To encourage bad accounts is to invite failure.

VIEWS AND INTERVIEWS.

The Miller in Art.

We are told that probably the smallest painting ever made was the work of the wife of a Flemish artist. It depicted a mill with the sails bent, the miller mounting the stairs with a sack of grain on his back. Upon the terrace where the mill stood was a cart and horse, and in the road leading to it several peasants were shown. The picture was beautifully finished, and every object was very distinct, yet it was so amazingly small that its surface could be covered with a grain of corn.

Hulling Wheat.

"It is not a little curious," says Milling, of Liverpool, Eng., "to watch developments, and see how practices voted obsolete often come into vogue again. Take the case of grain cleaners. Hulling or decorating wheat has long had a bane upon it, and the old type of vertical smutters and brush machine still held the field. Now we have horizontal cleaners, with the inevitable result that these have to take a barrel form, with wedges or other small projections to scour the wheat by friction as it moves along. Thus it has dawned upon the wisdom of progressive millers that rubbing, rather than percussion, is the right way for cleaning wheat in the dry process, and the development of barrel scrubbers—if we may call them so—is a proof of this opinion. Carry the process a little further, and we are once more engaged in the practice of 1869—viz., hulling wheat. In a new machine just brought out the method is carried yet another stage by hulling—or peeling—the wheat in a damp state with a machine of peculiar and even complicated character. It is at this point the novelty appears.

Ancient Milling.

The antiquity of the mill is a subject frequently utilized by writers for the press. Lately in the Detroit Free Press we have been told that "for ages various cereals used in bread-making were ground with very uncouth contrivances hardly deserving the name of mill as we understand it. They consisted of two portable circular stones, the upper being the smaller and turned upon the lower and concave one by means of an iron or wooden handle, the grain being placed between them. These stones were usually obtained from a quarry in the vicinity of Babylon, from which sufficient were taken to supply all the Eastern countries. The grinding was usually performed by two females, who sat opposite each other with the millstones between them, the upper stone being kept in motion by the hands of the operators. Very often this tedious work was assigned to prisoners, who considered it a most degrading task. This fact is recorded in Holy Writ, in which we are told that Samson "did grind in the prison house of the Philistines," and Jeremiah bewails the fact that the Babylonians "took our young men to grind."

A Real Helper.

Our contemporary, the Helper, whose interests are largely with the bakers, gives this suggestive council to its readers: "Lifting one's self by the bootstraps has frequently been used as an illustration of an impossibility. But the man who helps to improve the trade to which he belongs does more than lift himself; he lifts his fellow craftsmen also. There are many ways in which this can be done. Placing better goods on the market will, of itself, be a stimulus to every progressive man in the same line. Making goods in a better way will have its helpful effect sooner or later in proportion to the publicity given the improved method. And any better method is sure to be known before long. Men in these days are keen-eyed and sharp-scented, and the new way cannot be hid. In some cases the better method has cost the discoverer years of study and money; it is right he should have his reward. But very many things represent no such appreciable money value; and yet they are helpful, and should be made known for the general good of the trade; in these cases no one would be a loser, and very many would be gainers. There are scores of little "pointers," which could be given in a trade journal by a little effort and thoughtfulness on the part of its readers, and which would exert a positively uplifting influence on the trade in general. Is it right to withhold them?" There is nothing said here that is without its application to the miller. Will he act?

Feed Right.

Several practical points must be observed in the effort at high grade flour milling, or there can be no high grade milling. The Modern Miller states these in this way: "Be careful that you feed right and you have mastered the first important point in high grade milling. When frequently changing grades of wheat this matter of feed must be given close attention, for some grain which breaks easily requires the greatest amount of smooth roll and silk surface. Again you will find that certain kinds of wheat require much more break than smooth roll surface. It is an easy matter to get enough of the first mentioned kind through the break rolls, but a difficult matter is not properly attended to, to feed the latter strong enough to keep the dressing machinery busy. If that is not done there will be trouble. It is, therefore, apparent that the leading demands of the kind of grain to be ground and the capacity of machinery used should always receive the careful consideration of good millers. The miller must, to be successful, understand how to feed grain to the best advantage and also be able to adjust his machinery accordingly. To feed the same way in milling half a dozen different kinds of wheat, renders it absolutely impossible to get good results from more than one. The manner in which you feed does not determine every result, but it has a direct bearing on most of them. Every miller knows that if he wants to see what his mills are doing he must examine the stock as it comes from the last rolls, but finding it unsatisfactory there he can not change the result by the after part of the process—he must change the feed. Of course, if the rolls are not in good condition, that has an important bearing in the matter of determining the cause of too much low grade; but the miller should know whether his rolls are sharp or dull, as well as what kind of grain he is running and how best to feed it. This applies to good machinery. If you have not that kind, get it as quickly as possible, or continue wasting time and labor."

Milling School.

Views favorable to the establishment of a milling school have not always been looked upon with favor by practical millers or milling journals. A writer in the Milling World has lately put forward a plea for such schools. He points out that all sorts of industrial schools exist to-day among wood-workers, iron-workers, pottery-workers, bricklayers and many other trades. True they have had a measure of ridicule heaped upon them, but now this form of criticism is dying out. Germany had a milling school that justified its existence, and "one started in America," says this writer, "would find good encouragement, if it were properly managed." Then comes the argument for the existence of a milling school as seen by this writer. He says: "There ought to be a milling school, one in which millers could be trained in every branch of flour making and use, from the uncleaned grain at the door to be tested dough and bread at the end of the line. Too many millers there are who ignore what they call the "book" side of their occupation. One miller talks of making "95 per cent. of flour from his wheat, meaning 95 pounds of flour from 100 pounds of wheat. Another insists that "bran makes flour when it is smashed fine enough," and he is trying to devise means to "smash" it fine enough. Another asserts that "creamy color in flour means that the flour is rich." Others make quite as queer assertions. How many of these men would hold such fantastic ideas, if they had even a rudimentary knowledge of the actual amount of actual flour in wheat, of the constituents of bran, and of the meaning of color in flour? A good milling school might do much to dissipate error, that costs millers dearly every year. It would enable a young man to plan a mill properly, to equip it perfectly, and to manipulate it successfully, while now all these things are learned by "hard knocks" and at large and discouraging expense by experiment. Apprenticeship in a regular mill may be a very good thing so far as it goes, but it does not go far enough. It teaches the doing without the reason for doing. When one thus taught is faced by a new wrinkle, his practice deserts him. He has nothing to fit the situation. Had he full knowledge of the work, such as he would secure in an experimental mill, he would be able to meet the occasion. I believe in the idea of training millers regularly in both the theoretical and practical side of their work. Certainly no writer on milling ought to sneer down the idea of milling schools. They will come some day, and they will succeed."

SHIPMENTS VIA NORTH BAY.

A JOINT circular has been issued by the Canadian Pacific, Manitoba and Northwestern, and Great Northwest Central Railway companies, regarding the shipment of grain, flour and millstuffs to North Bay for orders. It provides that shipments of grain, flour and millstuffs will be accepted (subject to the following regulations), consigned to "North Bay for Orders," when intended for "Domestic Consumption in Canada."

Shipping receipts must be qualified with the following words, "for domestic consumption," and must be plainly endorsed "North Bay for orders," with the name and address of the consignee. This information must be carefully transferred to the way-bill for the information of North Bay agent, to assist him in giving notice of arrival and obtain prompt instructions for furtherance. All way-bills must be drawn at the current "all rail" Montreal rate.

Orders for furtherance of grain, flour and millstuffs from North Bay to New York and Boston for export at a through rate, will not be accepted. Shipments intended for export must be shipped direct to the seaboard under the tariffs and regulations provided for such traffic.

Twenty-four hours will be allowed shippers after the arrival of cars at North Bay to give instructions for final destination. After the expiration of this period a charge of $2 per car per day will be made for detention. Orders for furtherance must be sent to agent C. P. R., North Bay.

In view of the large crop to be handled, agents and shippers are reminded that it is to the interest of all that cars be loaded to full marked capacity. Agents will therefore impress on shippers the necessity for full loads. At the same time shippers must not load between the marked capacity of cars, as by so doing the safety of trains will be endangered.

Agents must see that shippers enter on shipping bills the correct weight of grain loaded in each car. This is important to prevent unnecessary clerical labor in correcting way-bills at weigh scale stations.

The maximum weight will be the stencilled capacity of the car. The minimum weight for standard 40,000 lb. cars will be 36,000 lbs. Exceptions are flour bbls., 30,000; bran and shorts, in straight or mixed car loads, 30,000.

The above requirements will be waived when cars having a less capacity than 40,000 lbs. are provided. In such cases actual weight, but not less than 24,000 lbs., will be accepted. Cars without stencilled capacity will be considered as having a capacity of 24,000 lbs.

"NAKED LIGHTS."

IN a mill
That wasn't still,
But cleaning wheat at night,
Moved a boy,
Full of joy,
Carrying a "naked light."

Ten sacks per hour
He must scour,
Just to keep things right,
The well-known warning
He is scorning,
"Never use a naked light!"

Up and down,
He's looking round;
Quoth he, "Of danger there ain't nothin'!"
But a rush of dust,
And a sudden bust—
Well! They put the pieces in his coffin!

And on his tomb
These lines did loom,
In letters full and bright:
"In loving memory
Of Tommy Emery,
Who always used a naked light!"

—GASPARD DOBRE, in London Miller.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

A WORD WITH SUBSCRIBERS.

IT has become a fixed rule in newspaper offices that the books should show a clean paid-up subscription list on the opening of each new year. If, perchance, subscribers have forgotten for a time that all first-class journals look for a close adherence to this pay-in-advance system—which is the only sound business system where the cash outlay is as large and continuous as in newspaper publishing—they are ready to accept the publisher's reminder and act accordingly before the old year will have finally passed out of sight. There are some subscribers on the lists of the CANADIAN MILLER who require this reminder at this time. Those who have paid their subscriptions beyond January, 1893, will have no direct interest in this paragraph. All others will receive an account of their indebtedness in this number of the MILLER. We ask that they make a point of at once enclosing the amount in an envelope and mailing it to this office. There is no time like the present to attend to a business matter that needs attention. A writer on commercial topics has well said: "Why is it that men will constantly place in opposition to their greatest endeavors the damnable, retarding influence of a total disregard of the promptness which should mark the discharge of the minor duties in the form of what is too often considered the insignificant details? Here we find a man who would not think of putting off until an indefinite future date the preparation for the meeting of demands upon him in which there was at stake the consideration of hundreds of dollars and his credit with one firm or individual; but the same man will carelessly cast aside for future consideration fifty seemingly insignificant accounts which are brought before him in the course of one day, ignoring the principle of life which teaches that the 'little things make up the sum of living.'" We have no need to remind our readers of the determined efforts being made by the MILLER to give them a journal that shall in every way creditably represent the large and important trades of which they are members. We shall expect to hear from all concerned promptly.

THE MILLER'S CHRISTMAS.

THE old adage "business is business" is fixed with remorseless rigidity in the creed of the business man of the present age. It is the measuring bushel of his every act, and one would fain attempt to draw him from his idols.

Yet, were the MILLER a preacher, rather than one whose vocation it is to talk "strictly business," it would be disposed to choose for a text "Let school keep itself," and enjoin upon the busy miller to forsake his rolls and scalpers for the nonce and participate in the pastimes and festivities, the home life and good will, the rest and enjoyment that are, or at least ought to be, the environment of the Christmas season.

The CANADIAN MILLER believes itself consistent in this spell of sermonizing, having devoted comparatively little space to talking "shop" in the present issue of this journal. We have given the number the name of "The Miller's Christmas," and are anxious that Christmas shall be, to every miller, throughout the broad constituency covered by the CANADIAN MILLER, a genuinely merry Christmas.

The bill of fare set before our readers for their Christmas dinner will, we apprehend, be relished by young and old. The stories and poems are fitting contributions to the literature of the holiday season and will be appreciated by our readers. If the miller occupies a foremost place in the walks of commerce—something "nobody will deny"—he has also in all ages held a place in literature that has given an æsthetic coloring to his calling that will compare favorably with those engaged in other lines of business.

Yes, it is Christmas once more, kind reader. To quote from a recent poem by Joel Benton:

Come young and old, from every side;
Come rosy maid and gentle swain,
It is the holy Christmas-tide
That joyously we meet again.
The holly hangs upon the door;
It is no time for work or woe;
Now jollity commands the floor,
And joy comes with the mistletoe.

Bring in the Yule-log's ancient flame,
The soused boar's head, a rich repast!
Let sorrow go the way it came;
Let care be to oblivion cast.
The waits clear voices sound without;
Sackbuts and shawms make wholesome glee;
Twined is the boar's head roundabout
With garlands rich and rosemary.

And now the foaming wassail bowl
Shall bring us comfort and delight;
This is the season of the soul,
From golden morn to starry night.
Naught care we for the piercing cold,
The drifted snow or raging blast;
For Christmas never shall grow old,
From eons new or centuries past.

* * * *

The approach of Christmas means the very close following of the end of the year. The old year will have run its course before another opportunity will have been given the CANADIAN MILLER to address its readers. In the words of one of the earlier poems of Tennyson,

There's a new foot on the floor, my friend,
And a new face at the door, my friend,
A new face at the door.

We extend here the companion wish that our friends may spend many happy days with this new friend who will shortly greet them and in whose company they must, for another twelve months, travel.

WINNIPEG AS A TRADE CENTRE.

AT the opening of the board of trade grain and exchange rooms, of Winnipeg, Man., a fortnight ago, a speech was made by Mr. F. H. Matthewson, manager of the Bank of Ottawa, in that city, which has stirred up a lively interest in commercial circles in Winnipeg. Mr. Matthewson expressed his opinion, as a banker, that it was very important in the interests, not only of the grain trade, but of the city that receiving elevators should be erected in Winnipeg. He said that the security frequently offered by customers to their bankers was not always satisfactory, and that if grain merchants were in a position to offer the warehouse receipts of a strong public company, they would have much less difficulty in financing their business than at present.

Mr. Matthewson's suggestion is said to have been well received, and several of the speakers who followed him emphasized his remarks, particularly Mr. Bawlf, who urged that the question should be taken up by the citizens, as this was a proper place for a system of elevators, and as in the United States and elsewhere there were elevators at all the railway terminal points; also by Mr. Hoare, manager of the Imperial bank, who said he had long felt the necessity of centralizing the grain business in some way. The plan in the minds of a special committee which has been looking into the matter is briefly stated thus: That the elevator would have to be of a capacity reaching a million bushels, fitted with the most modern machinery for cleaning and drying grain. A good portion of the building would have to be fitted up with small storage bins, say of the size to contain one or two cars, to enable the identity of particular cars of grain to be preserved. A large number of such cars would undoubtedly be shipped in to these elevators for cleaning and treatment. This would add to the cost of the elevator. The advantage arising from the cost of the elevator would be that country shippers could send in car lots for storage. This grain would first be cleaned, then weighed by the Government weigh master, then inspected and placed in a bin. Thus the shipper could secure his warehouse receipt with Government certificates of weight and grain attached which would make them negotiable on sight. Unfortunately at the present time Manitoba has no sample market. With an elevator of this description in Winnipeg a good sample market would be established, because grain could be purchased and stored on its individual value. At the present time cars loaded in the country must be sent forward as far as Fort William before they can be unloaded; and in case of a blockade from any cause, east of Winnipeg, this elevator could be used to relieve cars reaching this point, and they could be sent back to the country for reloading, and make several trips, when otherwise they would be held on the side tracks east of here. The committee are now in correspondence with parties in Duluth and Minneapolis for the purpose of securing data bearing on the cost of buildings and machinery for the proposed elevator.

THE INSURANCE PROBLEM.

IN the CANADIAN MILLER of November we made reference to the generally unsatisfactory condition of the insurance policies issued to shippers when exporting grain, flour and other products by vessel to Great Britain, West Indies and elsewhere. We are this month in receipt of a letter from Mr. W. H. Meldrum, of Meldrum, Davidson & Co., Peterborough, Ont., who has experienced some of the pleasantries of holding an insurance policy, the value of which, at the time when it ought to represent a value, it is difficult to appraise.

Mr. Meldrum writes: "You insure your goods, and then if goods are lost or thrown overboard during some sea peril you have no recourse for recovery of those goods or their value until the general average of the whole cargo is adjusted and all interested are taken into account. A case in point: Our goods were thrown overboard from the steamer Duart Castle on her way to Jamaica last January and we are only in receipt of a favor from owners of vessel on Dec. 3 intimating that the general average adjustment had been submitted for the approval of the underwriters, when, "if satisfactory," a statement would be issued to each consignee and settlement made with them. The reason given for so much delay is the difficulty in getting necessary information, as the steamer had goods on board for thirteen islands. The insurance company refused to make good the loss or do anything in the matter until the average adjusters had settled the general average; so that after all it seems to me that the insuring of our goods is of practically no benefit. We have lost several lots, but have never seen a cent of insurance company's money, as the carriers always paid for the goods lost."

This statement of conditions from one who has felt the fire is closed with the pertinent question: "What good is to be accomplished by insuring?" The matter is, in the judgment of Mr. Meldrum, of the greatest importance to millers, and every effort should be exercised by the Dominion Millers' Association to solve the difficulty.

There is another view of the situation mentioned by Mr. Meldrum in his letter, and it is this: "Why should banks insist on insurance when practically it is only putting money in the pockets of a corporation, as a sort of guarantee that if shipping company refuse to pay we will make them?"

What would Mr. Meldrum suggest as a remedy? "Form a connection," he says, "with a reliable company on certain conditions to be approved of by the Dominion Millers' Association. These conditions should embrace particulars re. damaged portion of the cargo; what percentage the company will pay for, if any, or will they only pay on a total loss; the time to be stated within which they will pay for loss, running the risk of being repaid by carriers." Or another remedy Mr. Meldrum thinks might be found in the Dominion Millers' Association forming itself into a guarantee or marine company. "Through the Association," he says, "millers should be able to get on a better footing re. insurance and receive some benefit for the money they pay, as in a large shipping business, especially in a year when exporting is profitable, insurance premiums are quite an item of expenditure."

The CANADIAN MILLER expects to have further to say on this question in future issues. It is a matter vital to the success of the export trade and we want to hear from all millers who have information or opinions to impart bearing on the question.

BY THE WAY.

AMONG other important matters crowded out of this number of the CANADIAN MILLER, in order that "The Miller's Christmas" may be the more thoroughly Christmasy, are the regular grain trade review and market reports. But even the busy 'Change will lose nothing by a holiday. "Observer" also drops his "Northwest Observations" for this month, but promises a batch of jottings for January. "Scribe" lays aside his pen that his ears be not muffled against the merry jingle of the Christmas bells. As the first number of the new year we expect to publish in the January MILLER several special and practical articles retrospective and prospective of grain and milling matters, and all the regular departments will be resumed.

The London Miller reminds those who have decried lately with much emphasis against the publishing of information giving the particulars of stocks of grain on hand and coming forward, that "invective has no appreciable effect on stocks in granary. Of the efforts made in America to withhold information as to the amount of wheat coming forward, and in various ways to keep up value, the outcome has been positive exaggeration on the other side. An undue importance has been first attracted and then assigned to the visible supply, and an undue insistence that there must be immediate relief in the way of price advance has concealed the truth that no visible supply increases the crop yield, and that if we are overweighted this side of the rough weather, we shall have our due and exact compensation in the spring."

"Holding wheat" is a subject that never lacks discussion, though the disastrous results of the "hold-your-wheat" circular of United States farmers a year ago has given something of a quietus to that line of thought since that date. It is important, nevertheless, that any intelligent light that can be thrown on this question should not be withheld from those interested, for after all it is a moot question. The Minneapolis Market Record, which usually possesses an intelligent grasp of grain trade questions, says in a recent number: "As a rule, wheat is sold more freely when prices are low than when they are high. That is shown in the comparative records of seasons of high prices and seasons of low prices, before this year and last, as well as in these years. Before the large crop of 1882 there was a small yield and before the large crop of 1884 there was the small crop of 1883. The large crop of 1889 was preceded by the small yield of 1888, and the larger yield of last year was preceded by the 1890 crop of less than 400,000,000 bushels. Instead, this year, of a large crop following a small one as in all other seasons, it is a big yield succeeding a big yield. There is enough in that to make all the difference that exists in prices now and at the end of the season from the small yield two years ago. While the circulars to hoard wheat did not merit respect when they were issued, and were as absurd then as they were impotent later, they were as highly commended at the time by the press generally as their propriety is now generally condemned by the same press, which conveniently shifts to the shoulders of the authors its own part in them to avoid the public ridicule it fully earned. Farmers of experience have been too often told by self-constituted advisers when to hoard wheat and when not to hoard it, to be so easily done for by the cry for help of every drowning speculator that tells them to "wade in."

SHIPPING REGULATIONS.

PRESIDENT BAIRD, of the Toronto Board of Trade, announced to the members of the grain exchange a few days ago that arrangements had been completed for the shipping of grain via United States ports, and he gave the following as the grades:

Boston—No. 2 spring wheat, No. 1 red winter wheat, No. 2 red winter wheat, No. 1 white winter wheat, No. 2 white winter wheat, No. 2 goose wheat, No. 2 white oats, No. 2 mixed oats, No. 2 Rye, No. 2 peas, No. 2 black eye peas, No. 2 mummy peas, No. 2 white eye marrowfat peas, No. 2 buckwheat, No. 2 barley, No. 3 barley, No. 3 extra barley.

New York—No. 2 spring wheat, No. 2 red winter wheat, No. 1 white winter wheat, No. 2 white winter wheat, No. 2 goose wheat, No. 2 buckwheat, No. 2 white oats, No. 2 mixed oats, No. 2 black eye peas, No. 2 peas, No. 2 barley, No. 3 extra barley.

Complete arrangements have been made at these points for receiving grains of these grades. There will be no use in shipping any other. The Americans will accept Canadian inspection, and inspectors will inspect the grain at the following frontier points:—Suspension Bridge, Black Rock, Toronto, Port Hope, Kingston, Prescott, Point St. Charles, Outremont, Brockville and Couteau Landing. The underlying idea is to keep unclassified or rejected grain from going to the seaboard.

As an illustration of how the new regulations work, Mr. Baird instanced the following out of his own experience. He said: "I bought some peas a few days ago for export from a man in the west. He said they were No. 2, and I ordered them to be shipped to New York. At Point St. Charles the inspector opened the car and found that the peas were full of bugs, and rejected them. They were at once returned to Montreal, where they are, for all I know, yet. The storage and extra freight will have to be borne by the man who sold to me."

The grain section have asked the railroads to send the following memo. to their agents:

Owing to the new regulations brought in force by the United States trunk railway lines all grain for export must be inspected either at point of shipment or at the frontier. Any grain that fails to grade No. 2 or better will be stopped and sent back to the nearest Canadian point. where it will be stored for account of the owner. It is imperative that all shippers should be notified of these regulations and avoid extra charges that may be incurred through neglect of compliance as to grading as per memo. given above.

THE WHEAT SITUATION.

FROM BRADSTREET'S.

NO little ado has been made of late by those who have been disturbed by an alleged undue depression of prices in wheat due to reports of extraordinary large available supplies in the United States. The assumption has been made by the class referred to that wheat merchants throughout the world, speculators and others, are all so simple as to infer that because available stocks exceed any like total held at a corresponding period, therefore the total net supplies available for export (as well as for home consumption) must necessarily be larger than ever held here before during the autumn.

Such a conclusion is neither logical, true nor creditable to those who arrive at it. Ever since the now antiquated basis was formulated upon which the "official visible supply of wheat" is prepared (available and) visible supplies of wheat after harvesting, in seasons of relatively equal abundance, have continued to exceed like stocks in preceding years, with few exceptions. In other words, with the growth of facilities for getting wheat from farmers' hands to markets, or into second or third hands, such grain has naturally gravitated out of producers' hands in larger and larger proportions, particularly since the development of organized and legitimate speculative facilities, the primary function of which is to carry available stocks of wheat, or more exactly, to carry our surpluses, from bountiful over to lean seasons.

These facts are known to every or to almost every well informed grain merchant in the country, as well as to those in the foreign countries to which we export. No one ever has supposed merely because the available supply of wheat increased 4,000,000 bushels within a week, against 3,000,000 the week before, or 2,000,000 in the like week a year ago—no one, we repeat, ever has supposed that therefore the wheat crop must be larger than has been presumed—that is, no one who knows anything about the subject. Nevertheless, we find there are voices raised against the publication of totals of available stocks of wheat because, forsooth, somebody is going to infer the crop is an enormous one if the increases perchance be heavy, or short if they are unusually small. This sort of reasoning is of the variety which once objected to railways because cows might stray across the track and be killed.

The foregoing has been emphasized because of efforts which have been made to belittle the value of an available supply report of grain crops. It may be worth while explaining to these critics that "the visible supply" covers stocks of several varieties of cereals at a score or more points of accumulation only, the identical stocks (except St. Paul, Minneapolis and Duluth) which it has included for twenty years or more. At one time these visible supply stocks constituted the available supply, but not within a dozen years. Within that period points of accumulation have increased very rapidly; some of the original "primary markets" are not "primary" markets at all; the thousands of interior or country elevators at the northwest have been constructed, and the necessity has thus been created for a compilation of supplies of available wheat—in other words, for the total of stocks of wheat available for practically immediate shipment by rail or water to fill a milling or export, or even purely speculative, demand. Of one thing the timid ones, who have dreaded available supply report totals, may rest assured—one of the safeguards against speculative "corners" in the food grains is to be found in the reports of available stocks of the same.

The "low price of wheat," therefore, is not necessarily due to exceptionally large stocks of wheat in sight on both coasts, for the people most interested in such prices at the principal markets here and abroad, as has been pointed out, are not of restricted vision. In the first, second and last places, the cause is simply abundance. Whatever may be the private, speculative or other view of this, that or the other merchant, or of the outside public, anyone who is interested enough to do so may easily satisfy himself that there is, so far as it may be forecast, quite an abundance of wheat to meet the world's demands this year, even if not more than enough as compared with the prospect one year ago. Then we were looking for a pinch owing to the Russian wheat and rye failures, and to short crops of the same in some other European countries. This year the United States have raised, say, 110,000,000 bushels less than last year, but they started in with from 35,000,000 to 45,000,000 bushels more, besides which, Russia and Germany are said to be better able to take care of themselves in that direction.

As that well-informed circular, Beerbohm's List, states, shipments from America and Russia to Europe continue to exceed the latter's requirements. It is now explained that Russia's wheat crop this year will equal 241,000,000 bushels, against 200,000,000 previously anticipated. More than this, the United Kingdom's greatly increased proportion of imported wheat flour (as compared with wheat) increases "the depressive power" of its receipts. France, it is said, is suffering from surplus importations of last year, and even drafts on her own supplies are very light. The same authority notes another cause of depression of wheat prices as the cheapness and abundance of American flour in the chief centres, and Dornbusch's List adds that the relatively abundant potato crop in Europe in this, the first half of the fiscal year, has tended to restrict the consumption of wheat and rye and therefore curtail demand to some extent, and with it naturally, the price. The promise of wheat exports from Australia and South America is declared to be fairly good.

According to a publication by the statistical bureau of the Hungarian Minister of Agriculture, this year's wheat crop of the world amounts to between 744,000,000 and 755,000,000 hectoliters. That of last year was ascertained to have been (in round figures) 750,000,000 hectoliters; hence says our consul-general to Vienna, "there is no difference between the yields of this year and last. The surplus of the yield over the want of wheat is 16,800,000 to 24,000,000 hectoliters. The rye crop may be estimated at 440,000,000 hectoliters; last year it was about 370,000,000 hectoliters."

But, after all this has been said—and it has been necessary to say it because it refers to what has been behind the prolonged (but not undue) depression in the price of wheat—it may be added that it is not at all unlikely that the latter half of the cereal year may witness an appreciable advance in the price from the recent low level. As a London writer says: "Because American millers now furnish flour at 19s. 6d. per sack, it is not a good reason that they should continue to do so. . . . . Railway rates from northwestern mills to New York, ocean freight to London, discharge from ship to warehouse, factors' commission for sale in Mark Lane deducted, what paying balance can the American miller get from 19s. 6d. for 280 pounds of good flour? The position is not tenable for any long period."

In brief, isn't it almost time for the pendulum to swing the other way?

H. C. Scott, Highgate, Ont.: "Enclosed find $1 for CANADIAN MILLER. I would miss its regular appearance."

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

CONCERNING PRICES.

TO many it is a conundrum why in the face of the depressed condition of the British flour markets United States millers continue to ship flour to England in large quantities. "When English buyers can purchase Canadian flour at their own doors at the same price that it is selling for in this market," says the Montreal Trade Bulletin, "depend upon it there is something wrong with the export trade in flour. But in spite of this state of affairs, flour still finds its way to British markets, especially from the United States." Discussing this question with a leading local miller, the remark was made to the CANADIAN MILLER that after all when one understood fully the situation, the conundrum is not so difficult of solution. And taking from his desk some United States grain returns of that day, this miller drew attention to the prices at which the large bulk of grain was selling in the States. The prices which are quoted on the Chicago 'Change represent the prices obtained for a very small percentage of the actual grain sold by the farmers of that country. An average difference of probably 10 cents a bushel exists between the prices listed on 'Change and those obtained in the main by the farmers. For milling purposes, however, the low-priced wheat is usually as good as that which is sold for the higher figure.

The whole matter is clearly stated in a commercial article recently published in the Globe. The writer says:

"On all the leading markets of the United States the wheat quotations given are those of wheat known as the regular or speculative grades. They include the only kinds and qualities of wheat which can be tendered in fulfilment of a contract made on the boards of exchange in the cities where the quotations are given. Thus in Chicago it is "regular No. 2," which was quoted at the close yesterday at 72 5-8c for November. This is the price in store in certain elevators in Chicago, the warehouse receipts of which are accepted as legal tender in fulfilment of a contract. But to arrive at what this price would mean to the farmer in the west it would be necessary to deduct:

(1) The amount paid to the Chicago broker.

(2) The charge of placing the wheat in store in the elevators.

(3) The freight from the point of shipment to Chicago, which alone may be as much as ten or fifteen cents per bushel.

(4) The cost of handling and profit to the middle man who buys the wheat from the farmer.

With all these deductions made we should arrive at the price the wheat would net the farmer. The average rate of freight from Chicago to New York is 8½ cents per bushel during the year, whereas the average freight from Ontario points to New York is 13 cents per bushel, a difference of 4½ cents in favor of Chicago to the American shippers. But an important difference, comparing our markets with those of the United States, is found in the fact that not over 25 or 30 per cent. of the wheat received at the principal markets in the United States will grade up to the regular grade mentioned. During the past month some days when the receipts were 500 cars at Chicago only 10½ per cent. inspected the regular or speculative grade No. 2. The balance, although in some instances for milling purposes of equal value to that which inspected No. 2, sold on an average at 10 cents per bushel less. This means that 70 per cent. of the wheat received sold at 10 cents per bushel less than the published quotations. This wheat is sold to go into the markets of the world and is not held for speculative purposes like the regular No. 2 grade. The same thing is true of Detroit, where No. 2 white was quoted yesterday at 72c. But No. 3 white, which is very frequently 58-pound wheat, and will not average 57 pounds of good sound quality, can be bought at 9 cents per bushel less, and from this price elevator charges, freight, commission, etc., have to be deducted to ascertain what it nets the farmer at country points. It costs about 1 cent per bushel less to put the wheat in New York from Detroit than from Chicago. This places Detroit at an advantage of 5½ cents per bushel in freight alone, as compared with western Ontario points. The same remarks apply to St. Louis and other points at which quotations are given. Another fact which shows the absurdity of basing any argument as to the real value on the quotations given for the speculative grades, is that while No. 2 is selling in Chicago at 72 7-8 cents, the same wheat is worth only 77½ cents in New York, or about 3 cents per bushel higher, while the freight to carry that wheat to New York averages 8½ cents, and at the present time is probably 10 or 11 cents. The same freight rates obtain on flour as on grain from the points mentioned, so that our millers labor under the same disadvantage in doing an export business, and up to the present time at many points they have been paying higher prices for wheat delivered at their mills than the grain men give for the wheat they export."

With this explanation it can be understood "why United States flour still finds its way into the States," and still further, the extent to which Canadian millers are handicapped in export trade alongside of the American dusties.

WEST INDIA TRADE.

With some there is a disposition, perhaps, to become a little dissatisfied with the growth of our West India trade. Difficulties have certainly come in the way; opposition and criticism have also been met with that have not been in all cases of the squarest kind. It is hardly possible, however, to study the utterances of Mr. Adam Brown, and other Canadians, who have visited the West Indies and given careful thought to Canadian affairs without being convinced that Canadian products occupy a favorable position in the opinion and judgment of the inhabitants of these islands. In a late number of the Dominican, a paper published in Dominica, not far from Barbadoes, we find expression given to the following kindly thoughts touching trade with Canada:—"Why not a happy interchange? [of products between the countries]. While we wish well to the trade with the United States, though they have their crushing McKinley tariff, still we want to see the commerce with our kith and kin carried on more vigorously. Up to now we seem to want information about Canada; and Canada, we fear, still wants information about us. If both sides will interchange thoughts and occasional visits, we look forward to the not far distant period when the commerce between the Dominion of Canada and the West Indies will be an important institution of both countries."

Another favorable utterance comes through the Voice of St. Lucia, a paper published in the islands of St. Lucia, near by to Dominica: "We feel," says this journal, "that there is much to be done in the way of drawing closer to each other, morally and materially, two countries forming part of the same vast empire, and so situated as to be the natural complements of each other. What the southernmost of the United States are to the northernmost, that and more are we to the Dominion. On the other hand, that Canada can supply us with many things we need, just as well as the United States, is being demonstrated more and more clearly on every voyage of the P. & B. steamers. And there can be no doubt that nowhere could we West Indians brace up our moral and material fibre, relaxed by tropical influences, better than by a taste of winter spent in visiting the large, busy cities and the vast agricultural areas of the Dominion."

A late report of the Collector General of Jamaica, shows that the increase of the imports into the island from Canada, for the year ending March last, are in greater ratio than from the United States. Thus:—

	1891-92. Per cent.	1890-91. Per cent.
From the United Kingdom	49	56
From the United States	37.2	34
From Canada	10.4	7
From other countries	3.4	3

Of these imports flour forms a considerable item, and we may expect, with the trade carefully watched and cultivated by our millers, that each year's returns will show a satisfactory increase.

FLOUR FUTURES.

The question of wheat futures is one that has given rise to no small measure of discussion among many different classes of the community. Even the preachers have taken a hand in the tussle, though not unfrequently they have displayed more zeal than knowledge of the subject. All classes of newspapers have made it one of journalistic polemics. It would not be courtesy to say that they had done else than handle the subject with intelligence. That is a rule of the craft. Yet the degrees of knowledge shown in the various contributions have differed one from the other somewhat. Milling and grain journals have pronounced on the question and they have not been all of one mind.

Such is the situation as regards wheat futures. They exist. But flour futures! Who ever heard, even the dusty miller himself, of a flour future? A well-known and ably-edited English contemporary, Milling, sees nothing extraordinary in such a possibility. Indeed the evolution, according to this Liverpool journal, has already taken place. "The necessary corollary," says Milling, "of a wheat future is a flour future. It would not be a difficult matter to prove this by a simple process of logic, but millers have for some time past arrived at the same conclusion by an empirical road of their own—although, possibly, many are hardly aware of the fact, and would stoutly deny that they approve of a future market for the sale of flour in any sense. It remains, however, confessed that a considerable business for future delivery is already being done by many of the largest and most progressive millers in a desultory sort of way with bakers as their buyers.

"As was to be expected, the embryo flour future has in due time made its appearance in the world in person, and very naturally it announces itself with the customary notes of woe.

"The correspondence that has appeared lately in the columns of Milling and Corn Trade News, revealing the existence of an extensive, although undeveloped and wholly unorganized system of flour futures, has contained not a few cries of pain, and, as a miller exclaimed in our hearing, "real infant bawling." This is only according to nature, and it may be considered a healthy sign.

"The mere birth of an organism is generally conceded to be sufficient proof of the necessity of its existence, and applying this reasoning to the case of the embryo flour future it follows that as it came into being as a natural growth, not exotically forced and reared, but spontaneously and unbidden—the powers that be, the trade directors, the deliberative and executive councils of commerce should take the shaping of its future into consideration and either minimize its ultimate powers for evil or foster and cultivate its potentiality for weal.

"The practice of selling flour for future delivery is becoming very general; let it then become a properly recognized branch of the trade, and be organized by the various associations at the chief centres of trade, upon a sound and business like footing.

"On the Paris flour market for many years flour futures have been successfully dealt in, to the manifest advantage of millers and consumers alike, for in no other city in the world is flour kept at such a high level, while the millers, as a class, are prosperous in a like degree."

SHE KEEPS EIGHTY SERVANTS.

The Countess of Aberdeen, who keeps eighty servants in her home in Scotland, and is considered to be the one woman in Great Britain who has come closest to a solution of the servant-girl problem, will tell of her methods of treating her help, etc., in an article for The Ladies' Home Journal entitled "How I Keep My Servants."

TERMS OF TRADE.

THE following are the "Terms of Trade" prepared after careful consideration by the grain section of the Toronto Board of Trade, and adopted by the Council and the general board. Under these terms transactions in grain will in future be conducted. Their importance to millers and grain men cannot be too fully emphasized, and the prudent man, who may wish to save possible trouble in the days to come, will keep this number of the CANADIAN MILLER near by for ready reference. The terms are:—

Definition of terms in buying and selling grain, flour, produce and provisions in this market, or at the Call Board, or at other times between members:—

F. O. C.—All sales made without specified conditions will be considered as strictly free of charge (f.o.c.) The seller to be under no obligation to furnish conveyance.

All business days mentioned to be terminable at three o'clock p.m., except Saturdays, when the hour shall be one o'clock p.m.

F. O. B.—To be interpreted as free on board sailing or steam vessel or barge, such conveyance, unless specially agreed upon, to be provided by the buyer; and in case he fails to provide such conveyance within five days after sale he is required to take the property as it lies, free of all shipping charges, on presentation by the shipper of a proper warehouse receipt. During the five days the property to be at the seller's risk of fire, but after the five days have elapsed to be at the buyer's risk. When being shipped into vessel to be at buyer's risk, and if not insured by him the seller to be at liberty to insure the cargo, and to charge the same to the buyer. The seller to give the buyer not less than five days free of storage from date of delivery.

F. O. B. CARS.—Cooperage of flour under this term being always the duty and at the expense of the seller. The same to apply to butter and other cask goods. F.o.b. simply not to apply to sales in which the shipment is made by railroad cars, when the term will be distinctly f.o.b. cars, and in this case the seller has to provide the cars, and receive payment on presentation of original shipping bill. It being understood that due diligence is to be used by seller in obtaining cars, and also that the buyer may if he wishes supply cars, but no delay in making delivery which may occur through not getting cars shall entitle either buyer or seller to cancel transaction or to demand any reduction in the price, although in the interim prices or freight rates may have changed.

IN STORE.—The buyer shall be subject to the current term of storage, not exceeding one cent per bushel on grain and five cents per barrel on flour and meal, the property to be at the buyer's risk immediately on delivery. When the property is liable to any back charges, such as accrued storage, shunting, freight, or other charges, such must be paid by the seller, and the seller must satisfy the buyer that such charges have been settled, or the buyer may deduct the same from the invoice.

ON TRACK.—This term to mean the delivery of the property in the cars of the railroad, in the yard, or on the track where such cars are ordinarily placed after arrival in the city, or at any station on the line of road where the sale may be made. The property to be free of charges in its then position, and delivery to be made by the railroad shipping-bill or proper order, properly endorsed to the buyer. The freight and charges to be deducted from the invoice, unless satisfactory evidence is afforded the buyer that such charges are paid.

CASH.—All sales to be made for cash, and payment to be made as follows on the different terms:—

F.O.B.—On presentation of the bill of lading, unless the five days provided for have elapsed, when the payment is to be made on the presentation of the warehouse receipt or receipts.

F.O.C.—Payment to be made on the day of presentation of warehouse receipt or receipts. All accrued charges to be paid by the seller.

IN STORE.—Payment to be made on the day of presentation of warehouse receipt or receipts.

DELIVERY.—Payment in all cases to be made before the closing hours of the bank on the day of presentation, unless by special agreement. Property in all cases to be at buyer's risk immediately after delivery of shipping bill or order.

Delivery will be considered completed on presentation of proper documents in all cases of sales f.o.b., f.o.c., and in store at any of the regular city warehouses or elevators, duly posted on 'Change, unless otherwise specified at time of sale; also on track delivery except when buyer is allowed to weigh the property, when presentation of the invoice of the ascertained weight within the four days allowed shall be sufficient.

TRACK DELIVERY.—Payment to be made on properly endorsed track delivery shipping bill or order, except when the property is subject to receivers' weights, when payment is to be made immediately on their being ascertained—in no case more than four days being allowed for ascertaining such weights. After expiration of the four days, buyer being subject to advice note, or invoice weights.

CAR LOADS.—When car loads of grain, meal, feed and other produce are purchased without any specified agreement as to quantity to be loaded in each, it will be understood that a car load of Ontario grain shall mean 30,000 lbs., and a car load of Manitoba grain shall mean 40,000 lbs.

If any greater or less quantity be shipped, the excess or deficiency, if it exceeds five per cent., shall be settled between buyer and seller at market price at time of delivery.

CAR LOTS.—On contracts for more than one car of grain, flour and other produce, f.o.b. cars, any point, the seller to have the right to deliver same in single car lots with proper documents attached, within the time specified in contract, unless otherwise agreed.

GRAIN IN QUANTITIES.—When grain is sold in specified quantities, the seller shall have the option of delivering within five per cent., more or less, of the quantity sold.

OUTSIDE.—When grain is offered, as at outside points, it shall mean on the Grand Trunk or Canadian Pacific system of railroads within the Province of Ontario, south of and including Gravenhurst and Pembroke.

IMMEDIATE SHIPMENT.—Shall mean shipment within five (5) days following day of sale.

Prompt shipment shall mean within fourteen (14) days following sale.

TO ARRIVE.—To arrive shall mean shipped, or to be shipped, not later than day following sale.

AFLOAT.—When sales are made for shipments afloat the buyer to provide vessel; if he fails to do so within ten (10) days from date of notice that shipment is ready, he shall make payment on warehouse receipt.

DELIVERED AFLOAT.—Sales made delivered afloat shall be payable on presentation of proper documents on delivery of cargo in good order and condition over rail of vessel.

INSURANCE.—In all sales made of shipment afloat or delivery f.o.b. vessel, the buyer shall satisfy the seller that the same is insured against marine and fire accident, otherwise the seller or shipper may effect such insurance and charge the same to the buyer.

C.I.F.—Grain sold c.i.f. shall mean cost with insurance and freight paid (or allowed in invoice) to point at which delivery is stated, and buyer shall make payment on presentation of bill of lading and insurance certificates.

WEIGHTS.—When grain is sold with out-turn, guaranteed payments shall be made on presentation of bill of lading. The seller shall not be liable for a shortage unless reported within thirty days of arrival of grain at destination, and in default of such returns, bills of lading weights shall then be considered as binding upon the buyer, but it shall be compulsory upon the receiver at any time, if desired, to furnish an affidavit of out-turn.

INSPECTION OF MANITOBA WHEAT.

READERS are likely to peruse with a good deal of interest the particulars given below of a case involving the question of inspection of Manitoba wheat, which came before Judge Morgan, Toronto, recently, and where judgment was given as we have recorded it. At another time we may have some comment to make on the matter. In the meantime millers and grain men will find the particulars worth digesting:

This is an action brought to recover the difference in price between a car load of wheat sold by the plaintiff to defendants, and rejected by them, and the price realized by plaintiff at a re-sale on account of such rejection, and also for demurrage. The defendant filed a counter-claim for $100 in breach of contract by reason of four car loads of wheat sold to them under the same contract as the one car load not being according to contract.

By the written contract that the plaintiffs agreed to sell, and the defendant agreed to buy five car loads of No. 2 Regular Manitoba wheat, f. o. b. cars Point Edward, at 74 cents per bushel. The cars arrived at Sarnia Tunnel on different dates. Some of these cars were accepted and paid for by the defendants without requiring delivery at Point Edward, and without inspecting them, they apparently being satisfied with the certificate of inspection from Winnipeg furnished them with the Bill of Lading.

Upon the arrival of the fifth car, being the car in dispute, the defendant sent to the railway agent at Sarnia Tunnel and obtained a sample of the wheat from the car and had it inspected by a properly qualified inspector here (Toronto) not being willing to be governed by the Winnipeg Inspection as they had been in the case of the four cars. As a result of the inspection, the said wheat was pronounced "damp No. 2, Manitoba Regular," and the defendants declined to accept it.

After certain negotiations with a view of an amicable settlement, the plaintiff upon notice to the defendants, sold this car at the call board of the Board of Trade, for 8 cents a bushel less than it had previously been sold for under the contract with the defendants, thereby causing a loss to the defendant of $50.45.

This action was brought to recover the amount together with $17 as demurrage by reason of the detention of the fifth car not at Point Edward, the place of delivery, but at Sarnia Tunnel.

The defendants, among other things, contended that they are not liable because of the terms of the contract they had the right of inspection at the point of delivery, and having exercised this right, they found the wheat damp, and not in accordance with the contract, and therefore rejected it.

They further contended that there never was any delivery of the car at Point Edward as called for by the contract.

It is a well settled principle of law, that where a contract for sale of goods sold with a right of inspection calls for the delivery of those goods at a certain place, the buyer has the right of inspection at that place unless there is some usage of trade to the contrary binding on both parties.

The plaintiffs contended that there was such a usage, but I am unable to find from the evidence that there was, and the defendants would therefore have the right of inspection by the terms of the contract at the place of delivery. I find that they did inspect there, and as a result of their inspection that the wheat was damp, and they were therefore justified in rejecting it.

The plaintiffs contended very strongly that there was no evidence sufficient to show that the sample inspected was taken from this particular car of wheat, and even if it was, that it was a fair sample, but I am of the opinion that the evidence goes to the contrary.

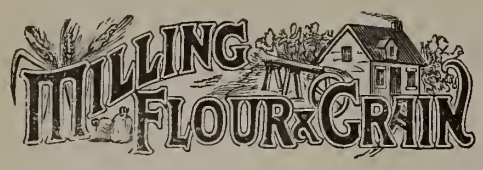
In view of the above, finding that it is necessary for me to deal with the contention of the defendant that there never was any delivery of the car at Point Edward, the plaintiffs therefore must fail in both items of their claim, because not being bound to accept the car, they would not be bound to pay for the demurrage.

As to the counter-claim, I am of the opinion that the defendants have disentitled themselves to recover by reason of their dealings with the four cars as shown by the evidence.

The plaintiffs therefore, will be non-suited, and the defendants counter-claim dismissed, no costs to either party.

HIS PLACE.

MEN are like sheep; they need a leader to leap the gully first and then they follow with a rush. Hence the optimist in trade who isn't afraid to invest is he who saves us from a "crisis." "When every man is blue," as the fellow says, "no wonder that money is taken with a fit of blues and goes off and gets tight."



CANADA.

BUSINESS at the Midland grist mill is brisk.

THE grist mill at Marsboro, Ont., is closed down.

THE Western Milling Co. are erecting a large mill at Pense, Man.

THE flour mill at Stonewall, Man., is reported to he doing a large business.

THE flour mills at Boissevan, Man., are running twenty-four hours per day.

CANADIAN oatmeal is being exported to the States in considerable quantities.

THE flour mill at Emerson, Man., is to be removed to Edmonton, Alberta.

THE flour mill at Whitewood, Assa., is being rapidly pushed to completion.

THE elevator at Balgonie, Assa., is receiving grain. Its capacity is 30,000 bushels.

RUSSELL & MCDOUGALL'S new grist mill, near Black Rock, N. B., is now in operation.

THE new joint stock flour mill at Oxbow, Assa., is expected to be in running order this month.

OGILVIE'S big elevator at Virden, Man., was burned on the 6th inst. with 25,000 hushels of wheat.

A. J. ROLLINS, of Exeter, Ont., will erect a grist mill on property recently purchased in that town.

THE Victoria Rice and Flour Mill Co., of Victoria, B.C., is shipping 3,000 sacks of flour to China by the Empress of Japan.

A LOCAL correspondent is enthused over the hum of the grist mill machinery at Elk Creek, Ont., and says times are brisk.

MANITOBA papers are complaining of certain wheat buyers in the vicinity of Methven being guilty of furnishing defective weight.

W. MORNINGSTAR'S large grist and flouring mill at DeCew's Falls, near St. Catherines, Ont., was destroyed by fire Nov. 23.

THE flouring mills of Daniel Comstock, of Kendall, Ont., were destroyed by fire recently, together with the barns and stables attached.

SAMPLES of corn grown by the Tuscarora Indians will be included in the exhibit for the World's Fair to be sent from Hamilton, Ont.

STAR'S grist mill, situated about two miles from St. Catharines, Ont., has been destroyed by fire. Loss about $7,000; insured for $3,500.

ROBERT CLARKE, miller, Walter's Falls, Ont., writes that business with him is brisk this fall, their flour being in good favor in Leeds county.

A TRAVELLER for the Sanford Milling Co., Fort Macleod, N. W. T., was lost on the prairie a fortnight ago, and afterwards found, frozen to death.

THOS. GARVIN, while engaged in feeding at W. J. Lackey's mill, Munster, Ont., received a severe wound in the hand from a knife wielded by a fellow employee.

THE Great Western Flour Mill, Woodstock, Ont., destroyed by fire recently, is to be rebuilt as an oatmeal and split pea mill with a capacity of 300 barrels daily.

IT is stated on supposed good authority that not less than 9,000,000 bushels of wheat have been carried out of Manitoba thus far this season by the C. P. R. and N. P. R.

THE work of putting in the new machinery at McKay & Co.'s flouring mill at the Chaudiere, Ottawa, Ont., is about completed. The new storehouse is also nearly finished.

A BUILDING leased by the Cleveland Seed Co., at Picton, Ont., was burned on 3rd inst. It contained about 4,000 bushels of peas. Total loss, $11,000; partly insured.

THE roller mills at Millwood, Man., have been running day and night for the past two months principally on gristing, there being as many as thirty teams with loads in one day.

THE flour mill at Killarney, Man., is now completed and is much prized hy the municipality. The capacity is 100 barrels per day. The machinery was furnished by Wm. & J. G. Greey, Toronto.

J. A. MCCARGER, who has bought the Zimmerman mills, formerly owned by G. C. Crawford, has recently put in a complete new plant of roller machinery manufactured by Wm. & J. G. Greey, of Toronto. Mr. McCarger says the plant is giving good satisfaction.

THE Carman Farmer's Elevator Co., Carman, Man., are considering the advisability of erecting a flouring mill in connection with the elevator and of asking for a bonus of $5,000 from the municipality.

AN accident occurred during the past month in the mills of George McCulloch & Co., Rapid City, Man., by which the cylinder head of the engine was blown out, necessitating the mills closing down for a few days.

THE Aylmer roller mills, of Aylmer, Ont., have been purchased by N. H. Stevens, of the Kent Mills, Chatham, Ont. Mr. Stevens will operate both mills. A large warehouse has been built at Aylmer by Mr. Stevens.

JOSEPH RATELL, an employee of Wm. & J. G. Greey's mill furnishing works, Toronto, while working at a shaping machine, got his right hand caught in the machine, and as a result was obliged to have amputated his index finger, half of the next and part of his thumb.

THE new mill of the British Columbia Milling and Feed Co., of New Westminster, B.C., is now in running shape and a good business is being done. In about a month the company expect to be manufacturing oatmeal and rolled oats. There is a dry kiln of 3,000 bushels capacity in connection with the mill, which is used for drying grain.

A MONTREAL dispatch of 3rd inst. says: Mr. W. W. Ogilvie to-day received twelve barges containing 192,000 bushels of Manitoba wheat, being the last to come by water this season. This makes a total of 1,354,000 bushels received by Mr. Ogilvie from the present crop, being the largest portion of any crop ever received by a single firm.

PILOT MOUND, Man., Sentinel:—One hundred and seventy-five thousand bushels of grain have been purchased at Pilot Mound already this season. A considerable quantity has been sent east, but the scarcity of cars still continues. On the Manitoba branch of the Northern Pacific, elevators are reported to be full and cars are also difficult to obtain.

A FORTNIGHT ago a car loaded with wheat demolished the stop block at the end of the siding at the Otonabee flour mills, Ashburnham, Ont., and crashed over the embankment. The car belonged to the Canadian Pacific road. Mr. Thos. Marshall, an employee of the mill, had a narrow escape from death. It will rest with the Grand Trunk to raise the car.

W.W. OGILVIE, Montreal, to whom the Glenora's cargo of wheat was consigned, has apparently appreciated the efforts of the crew when adrift on Lake Superior, and in return has forwarded a dozen or more barrels of his Hungarian flour to be divided between Capt. Fleming and his men. The men deserving of it will receive enough flour to last them through the winter.

W. E. ELLIS & Co., millers, of Oshawa, Ont., have assigned to James Dickson, of Manning's Arcade, Toronto. The liabilities, secured and unsecured, are about $26,000; assets nominally the same. The trouble has been caused largely hy the constant depreciation in flour and wheat during the past year and together with being involved in a real estate deal, which has locked them up to some extent. Much sympathy is felt for the Messrs. Ellis in their difficulty.

MESSRS. JAS. STEVENSON, M. P., Mayor Kendry and H. A. Mulhern, of the Peterborough Milling Co., have received the promise of General Manager Seargeant and Central District Freight Agent White, of the Grand Trunk Ry., that the railway company will erect a siding to their Blythe mills. The distance to be laid is about 1,500 feet. The two additional stories that are being added to the mill will be completed about March 1st, and the capacity of the enlarged mill will be 500 barrels a day.

AT a recent meeting of the Winnipeg grain exchange it was agreed that all quotations for wheat secured from outside markets should be prices for cash and May. For some time past no New York report has been received, but an endeavor will be made to especially arrange for these in the future. By an understanding with the board of trade, the presidents of the grain exchange and the board, together with the secretary, will hereafter be the permanent committee, having entire charge of the rooms.

THE Lake of the Woods Milling Co., at Rat Portage, Ont., intend during the coming winter to increase their water power. They have in now three turbine water wheels, and the intention is to take out one sixty-inch wheel and put in two measuring sixty-six inches instead. They will then have four turbines aggregating 1,400 horse power while they have now but 800, being a large increase. The new improvements will cost from $8,000 to $9,000, and will enable them to largely increase the capacity of their mill, which is now 2,000 barrels per day.

IT has been decided by the Winnipeg grain exchange, that in future the average grain rate for the whole province will be known on call transactions as standard freight rates. Thus 22 cents per 100 pounds is considered about the average freight from Manitoba to Fort William. The 22 cent rate will therefore he known as "standard" freight, and transactions will be carried on, on that basis. The rates on all points of the Canadian Pacific main line, between Burside and Alexander is 22 cents., and the same rate applies to a large number of points on the hranch lines, as well as on the Northern Pacific to Duluth. On the same basis, 47 cents will be the standard rate all rail to Eastern Canada points, the same as 22 cents will be the standard rate to Lake Superior points.

A DISPATCH of a fortnight since from Montreal says: "Mr. W. A. Hastings, manager of the Lake of the Woods Milling Co., has received word that the Lake of the Woods, Keewatin, was frozen over, and that the company's supply ships between the lumber camps and the barrel works and mill at the Lake of the Woods village were "stuck fast in the ice." The Lake of the Woods Milling Co. has taken advantage of the last ships leaving Montreal before the close of navigation to clear out all its old stock of flour, and last week shipped several thousand sacks to the United Kingdom, so that the warehouses are now ready for the new output from the mills from this year's crop. The close of navigation has the important effect on the grain and flour trade of increasing the cost of freight to the all-rail rate."

"CANADIAN MILLER" COVER.

IT is not necessary to draw special attention to the handsome cover that envelops the present edition of the CANADIAN MILLER. It will probably be the first feature of the journal to attract the eye of the reader. The artist, we think, has caught the spirit of the jolly miller in the design he has presented to us. The picture is realistic. The high character of the work itself carries its own impression and reflects credit on the Toronto Lithograph Co., which prepared the sketch and executed the work.

TRANSPORTATION TOPICS.

THE Boston and Maine railroad is now prepared to receive grain in its elevator at Boston.

SPANISH, Ont., on the Sault Ste. Marie Eastern division, is now a regular billing station. Freight for this point may now be accepted without prepayment of charges.

THE City Grain Elevator Company, of Buffalo, announces that that company has three elevators at the frontier, and that they would be pleased to have these utilized by Canadian grain exporters during the winter.

THE Grand Trunk have arranged that wheat from Manitoba from points on the Northern Pacific railway via Chicago, in order to entitle it to come under their present milling-in-transit arrangement, should be consigned and billed "Sarnia tunnel for orders for milling in transit," and through to Montreal as formerly.

IN order to facilitate the handling of Manitoba grain, and to avoid all possibly delay in our cars, the Canadian Pacific will permit shippers to reconsign grain forwarded to North Bay for orders to New York or Boston for export coming under the established grades. If shippers have at North Bay Manitoba grain not covered by the established grades they will permit shipment of such grain to their Montreal elevator, to be held there until a round lot has accumulated, say 8,000 bushels or more, and then they will carry this grain to Boston at the current through rate from shipping point to Boston plus 2½c. per 100 lbs., which will include Montreal elevation, 10 days' storage and reloading. If grain is not shipped within 10 days after delivery to Montreal elevator storage will be charged at the rate of ¼c. per bushel for each succeeding 10 days or part thereof, the maximum storage charge after the first 10 days to be 1½c. per bushel up to May 15.

THE following letter from vice-president Shaughnessy, of the C.P.R., has been received by Secretary Wills in answer to a letter from the Toronto Board of Trade: "The regulations now in force at North Bay point were forced upon us last year by the action of shippers and purchasers who failed to furnish any orders for forwarding the grain until several days, and in the majority of cases weeks, after its arrival at North Bay. Unfortunately these shipments to order are made at the season of the year when freight cars are in greatest demand, and when we are compelled to keep our cars moving with the least possible delay in order to meet the requirements of the trade and particularly the grain trade. We have urged upon everybody concerned the importance of having samples sent by mail or express from the point of shipment, so that they may be in the hands of intending buyers some time in advance of the arrival of the car containing the grain at North Bay. If this were done the directions about rebilling could be in the hands of the agent at North Bay in time to enable him to forward the car without detention."

A GHOST STORY.

BY G. B. CHANCELLOR.

I HAPPENED to be talking to a friend some months ago on the subject of ghosts and ghost-stories. We were both, I remember, somewhat sceptical, and did not fail to enunciate our belief that were we to see a ghost at that moment we should be in no way unduly alarmed, which, after the manner of sceptics from time immemorial, was a somewhat contradictory statement. I recollect, however, at the time, that I did hope that I should never have the experience, for as ghosts generally appear to only one at a time, I felt that perhaps under those circumstances my courage might not be so ready at hand as it was when merely discussing probabilities in an abstract way with a friend on a warm summer's afternoon.

Some days later I was repeating our conversation to another friend who affects a club in Waterloo-place, in one of the windows of which we were then sitting.

"It's all very well," said he, "to say you don't believe in ghosts until you have seen one, and on the whole I suppose it's the right thing to do. But I can't share your scepticism, because I have seen one, or at least something very like one."

"Seen one!" I cried. "Why, my dear Algernon, then of course you believe?—you couldn't do otherwise. But how was it? When? Where?"

"Well, I'll tell you; only when you stick it into one of your confounded articles, as of course you will, don't, for heaven's sake, mention my name or any of the other fellows I may happen to mention. Take another cigar. You prefer a cigarette—a bad habit, but "chacun a son gout."

"Well! Three years ago I returned from India on sick leave. I was as thoroughly knocked up as any man has been who has left that vile hole alive. You recollect, I dare say, that I went down into the country, and what with regular hours, fresh eggs and real milk I pulled myself so together in six months that I was able to come to town and bear the burden of a London season. It was a bold stroke, but I lived through it, and it gave me one of the strangest experiences which it has, I suppose, been the lot of man to encounter.

"I had been lunching in the suburbs one day in the beginning of June last, and had got back to town about 5.30 o'clock, just in time, I thought, to come and dress here, have a look at the evening papers and get to Westbourne terrace, where I was dining, at eight.

"Well, I had got here, had dressed, had come to the conclusion that politics was a hollow mockery when, during that awful ten minutes when it is too late to do anything seriously before starting, or too early to start, I happened to gaze out of the window. Waterloo-place was all but deserted. A celebrated author, as well known for the badness of his clothes as for the rottenness of his arguments, was just going into the Athenæum; a few men were sauntering into Pall Mall, and the whole place had a look of dreariness which one seldom sees even in the off-season in London. Just as I was turning away and thinking that five minutes too early at Westbourne-terrace would at least be better than the contemplation of this miserable solitude, my eye caught a singular form leaning against the base of the Waterloo Memorial. At first I thought it was one of the miserable wretches one so often sees seeking shelter from gutters and warmth from the touch of stone, but as I gazed the thing—I can describe it by no other name—became smaller, as I thought, in shuffling along, and then seemed to take the form of a large dog, with this one awful peculiarity—that its head was even the head of a human being. I had read "Dr. Jekyll and Mr. Hyde," but not even the strange metamorphosis of the amiable doctor, dreadful as it was, seemed to my excited imagination endowed with a tithe of the fearful aspect which the figure slouching along at the foot of the statue presented to my gaze. Throwing on my hat I rushed out, but as I neared the place the thing gradually faded into nothing. (A beggar crossed me as I passed, I remember, but nothing moved.) I looked about but no sign appeared of what I had seen. A policeman was standing a little way off, but he had noticed nothing, he said, and I quite believed him; he had himself been standing on that very spot not many minutes before, he told me, as he continued his beat. I remained on the exact spot where I had seen the thing for some seconds, when all at once I noticed a man gazing at me, as if spell-bound, rubbing his eyes and seeming in the greatest perplexity; then he came across the road to me, but as he approached he appeared to have altered his mind, for on coming close to where I stood—for I had walked to the other corner of the statue in prosecuting my search for the strange being I had seen—he turned back and took out his watch as who should say, 'By Jove! I've made a mistake about the time of my appointment,' but at the moment, I recollect, I thought it was rather to give a kind of mute excuse for a somewhat impertinent curiosity.

"That evening at dinner I was so full of my adventure that I'm afraid I appeared rather absent-minded—at least until the ladies left the room. Then I could contain myself no longer, and I told the story. Everyone was more or less impressed. Somebody—it was, I think, an aged diplomatist—quoted "Hamlet," and seemed to think he had found an explanation for it in the conclusion. One man, however—you know him, I think—J. B., of the Blues.

"What! the man who was so morose in his aspect that his friends all said he selected that regiment as the realization of a joke?"

"The same. Well, he said he would accompany me as far as Waterloo-place, and see if we could learn anything new about the horrible thing, for I was certain that it was a living phenomenon I had seen; and yet what, as J. B. pointed out, could account for its strange disappearance? It was now nearly half-past eleven, and, as many people would be coming from the theatres, we feared that we should not be able to distinguish the object of our search. We, however, took up our position at the corner of Pall Mall at the left of the statue, looking up Waterloo-place; and then a remarkable thing happened. As the people hurried across by way of the statue, we saw each other in his or her turn assume something like the appearance I had seen in the afternoon. The speed at which they walked alone made a difference, the quicker ones only, as it were, half appearing to become metamorphosed, the slower going through the process more apparently. But the strangest thing of all was that, as soon as they had passed a spot about a yard square at the corner of the statue nearest to where we were standing, they all immediately assumed their original look and bearing.

"Many times since then have I stood and watched the crowd of busy men—busy, I mean, on pleasure; for no one west of Charing Cross is busy for any other reason—as they pass the fatal spot, and I see them all turn into the horrid shape which had so appalled me when I first saw it on that evening in June, all unconscious of what they become, all so ignorant of what they seem to others.

"What is the reason? Heaven only knows. Perhaps the place has been cursed by some most powerful demon; perhaps it is an allegory of man's life. Who knows?"

THE INDIANS' CHRISTMAS.

AWAY up on the northern shore of Lake Winnipeg is Norway House, one of the oldest and largest stations of the Hudson Bay Company. To this point the Indians of a large territory bring their furs for sale or exchange. In the winter season Norway House has been a lively place for many years, especially during the holidays, when the company has been accustomed to provide some appropriate entertainment for its Indian hunters and trappers.

A Christmas dinner given here more than forty years ago is described by Mr. Ballantyne:—

"It was with something like awe that I entered the room and beheld two long rows of tables with puddings, pies, tarts, stews, hashes and vegetables of all shapes, sizes and descriptions smoking thereon. I feared for the Indians, although they can stand a great deal in the way of repletion; moderation being, of course, out of the question with such an abundance of good things placed before them.

"A large shell was sounded after the manner of a bugle, and all the Indians of the village walked into the room and seated themselves, the women on one side of a long table, the men on the other. Mr. Evans stood at the head and asked a blessing, and then commenced a work of demolition, the like of which has not been seen since the beginning of the world!

"The pies had strong crusts, but the knives were stronger; the paste was hard and the interior tough, but Indian teeth were harder and Indian jaws tougher; the dishes were gigantic, but the stomachs were capacious, so that ere long numerous skeletons and empty dishes alone graced the board.

"One old woman of a dark brown complexion, with glittering black eyes and awfully long teeth, set up in the wholesale line and demolished the viands so rapidly that those who sat beside her, fearing a dearth in the land, began to look angry.

"When the seniors had finished the juveniles were admitted in a crowd, and these soon cleared away the remnants of the feast."

WHO GROUND THE WHEAT?

NEAR a mill such as painters love to limn,
I sat on a rock by the brooklet's brim;
While the brook ran on and the wheels ran round,
And the grist for the farmer's boy was found.

"I grind the wheat," sang the brook in glee;
There would be no flour if 't were not for me;
I drive that lazy old wheel round and round,
And that is the way the grist is ground.

"I grind the wheat," answered back the old wheel;
I grind the flour and I grind the meal;
I keep turning the millstone round and round,
And that is the way the grist is ground.

Through the old mill's dusty, half-open door,
Came a noise between a rattle and roar;
'Twas the millstones singing as they turned round,
"We turn, and between us the grist is ground."

Then I heard the jolly old miller say,
As he helped the boy to mount and away:
"Fit for any king that ever was crowned,
The very best grist that ever I ground."

A HANDSOME CHRISTMAS PAPER.

THIS is the opinion of the many who have secured a copy of the Christmas number of the Toronto Saturday Night. Each year the publishers have gone on improving in their special issues. This time they have made a big jump ahead of anything hitherto attempted. Illustrations and literary contents are alike deserving of high commendation.

TRADE NOTES.

Attention is directed to the professional card of Fred. Roper, trustee, accountant, auditor, which appears in another column. His office is in Quebec Chambers, Toronto.

The Goldie & McCulloch Co., of Galt, Ont., hold a position in the commercial world of which any concern might be proud. Not only is it a record of honorable dealings with their many customers, extending over a long period of time, but they have ever adhered to the principle that the only right way to do anything is to do it right. Their flour mill machinery, which has its place in leading mills in all parts of the Dominion, is of the most perfect kind and stands perfectly the tests to which it is put. It is to be expected that a firm possessing the large resources of capital and experience that are elements of stability and strength with the Goldie & McCulloch Co., would also be foremost in all improvements and progress in their particular lines of trade, and if there is any one way, better than another, of doing work, they would possess it. This is the case with all work executed by this firm. Their wood-working, saw-mill, wool machinery, turbine wheels and other specialties are all constructed on this principle. Pre-eminently is this the case with their flour mill machinery. Whether it is the erection of a new mill or the re-modelling of an old mill the miller can rely on securing what he desires, and in unsurpassed excellence of design, workmanship and material, from the Goldie & McCulloch Co., of Galt, Ont.

A contemporary asks: "If the proprietor can't find time to read his trade journal, what's the matter with turning it over to his foreman or apprentice? It's a mighty poor thing if it isn't worth to his business ten times its subscription price, whatever its name may be."

M. McLaughlin & Co.

Royal Dominion Mills

TORONTO

PATENT ◎
STRONG BAKERS
LOW GRADE
From No. 1 Hard
Manitoba Wheat

PATENT ◎
FAMILY FLOUR
LOW GRADE
From : :
Best Ontario Wheat

Bran, Shorts, Screenings

In car loads or mixed cars, delivered at any railway station

Send for samples and quotations

BRANDS:
STAR : LINCOLN
CROWN
RED CROSS
CLYDE MILLS
SPARKLING RIVER

Unsurpassed for Uniform Quality

GREENFIELD MILLS + AYR. ONT.

D. GOLDIE, Prop.

Daily Capacity 500 Barrels

Royal Mills, capacity 1,800 bbls
City Mills, 1,100 bbls.
Glenora Mills, 1,200 bbls.
Goderich Mills, 1,200 bbls.
Seaforth Mills, 600 bbls.
Winnipeg Mills, 1,200 bbls.

DAILY CAPACITY

7,100 BBLS.

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ON PAGE EIGHTEEN

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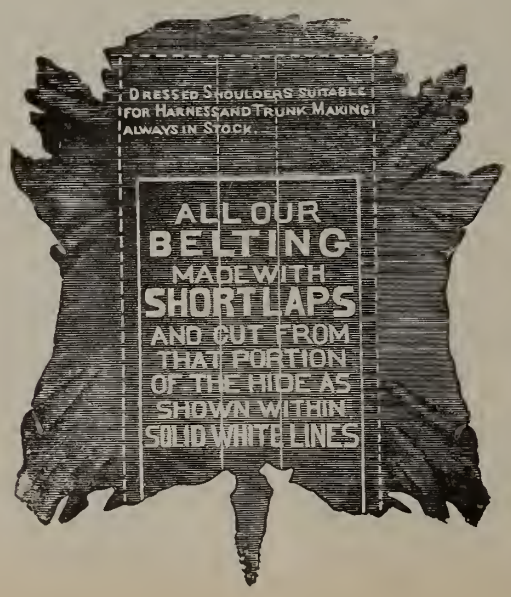
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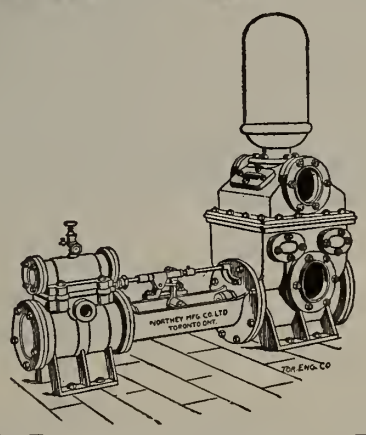

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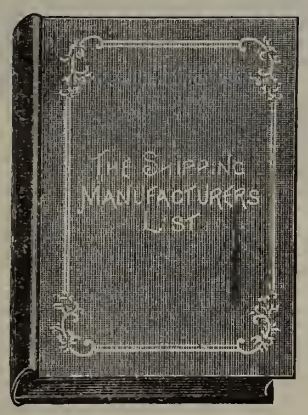

IMPORTANT ANNOUNCEMENT TO CANADIAN MILLERS

THE above publication will be issued on or about May 1st, 1893, and will contain a classified index of the different classes of manufacture of each individual firm in the Dominion making other than for local consumption. Millers whose mills have a daily capacity of 200 barrels and upwards will be indexed in the "Shipping Manufacturers' List," provided each individual or firm responds promptly to this request to mail the publisher a list of articles manufactured. Canvassers for the information asked are now on the road, but as the country is large and the time short it will be impossible to cover the whole field. This publication, when completed, will give to the enquirer in this and foreign countries the knowledge of what articles, small or large, are manufactured in Canada. Each article will be designated by a number which will refer to a corresponding number in another part of the book, under which will be recorded the names and addresses of manufacturers of such article.

It is of personal importance to every miller to see that the information asked for is given without delay.

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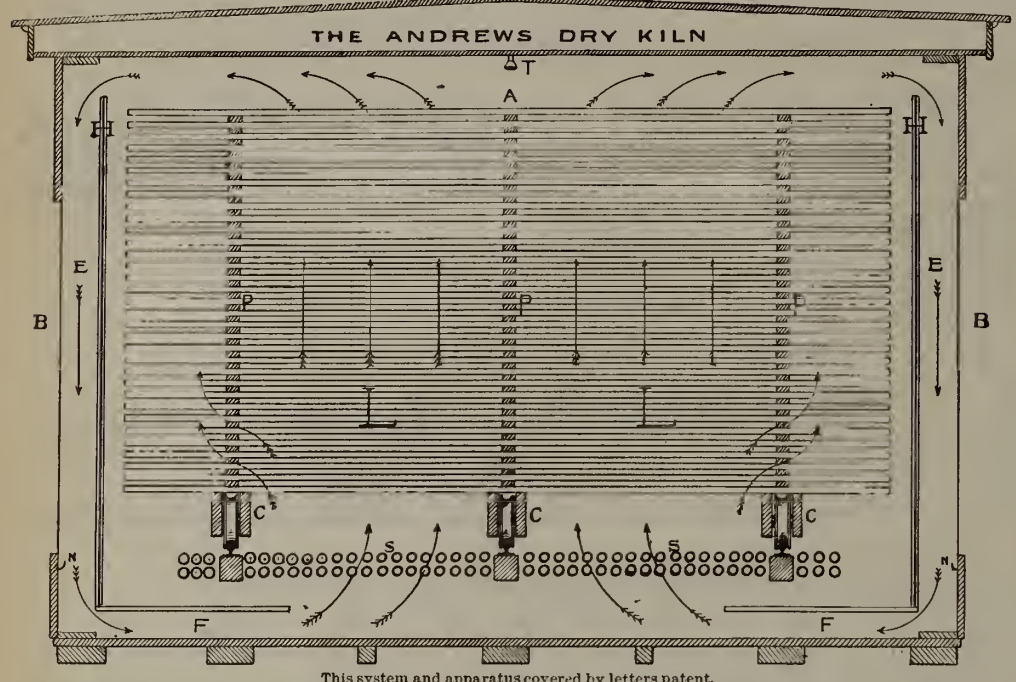
For Lumber, Lath, Shingles, Staves, etc.



This system and apparatus covered by letters patent.

A—Drying-Room. **BB**—Brass Condensing-Walls. **CCC**—Lumber Cars. **EE**—Down Air-Flues. **FF**—Bottom Air-Flue. **HH**—Inside Walls, protecting metal from heat. **LL**—Lumber on cars. **NN**—Brass Gutters for receiving condensed moisture. **PPP**—Sticks between lumber. **SS**—Double Steam-Coils. **T**—Automatic Steam Fire-Extinguishers. Arrows show direction of currents of air.

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HAS PROVED TO PURCHASERS TO DO WHAT IS GUARANTEED IN SAVING THEM MONEY IN

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There may be persons who do not appreciate the advantages of the artificial drying of lumber. But the shrewd men, in the manfacture of furniture and other woodwork where reputation would be sacrificed by a lack of proper m terial for good gluing and finishing, recognize a good system of drying as an important element of their success. High scientific authorities and thoroughly practical men are now agreed that the hot-blast and rapid-current systems ARE WASTEFUL, and that steam heat is the only safe means for artificial drying. The mode of applying steam heat most efficiently and economically is therefore now the essential point. The Andrews Dryer accomplishes this result more surely than any other known system.

NO FAN NO ENGINE
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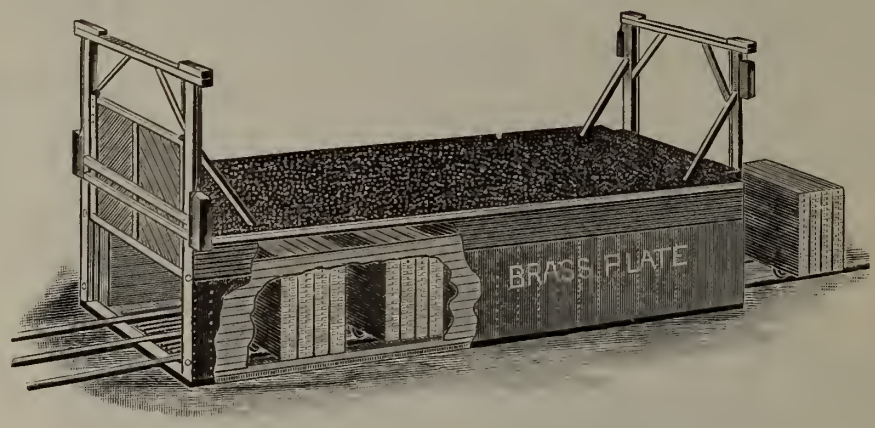
NO SPECIAL FIREMAN OR FUEL
NO EXPENSIVE BRICKWORK
NO RISK OF FIRE
NO CHECKING OR WARPING
NO CASE-HARDENING

. . . . **NO EQUAL** . . . .



Outside View of the Andrews Progressive Kiln, showing Lumber placed crosswise the building, on cars.

"WE PUT GREEN SPRUCE IN DRIPPING WITH WATER, AND IN EIGHTEEN HOURS IT WAS DRYER THAN LUMBER THAT HAD BEEN STUCK UP IN THE YARD ALL SUMMER."

This is the verdict of a Quebec lumber firm, and we can give equal results every time.

The Andrews Lumber Dryer

Has been proved to possess the following points of excellence:

1st. That its drying is rapid and perfect.

2nd. That external and internal checking and discoloration are entirely avoided by this method.

3rd. That the drying is done by a CONTINUOUS system and the temperature of the kiln is under absolute control at all times.

4th. That our Dryer is free from the varying air currents (always wasteful) incident to all fan and open-draft kilns.

5th. That our drying is done by the slow continuous movement of a large body of slightly-moistened air.

6th. That our condensing surface is so very large as to be adequate to precipitating the moisture of the saturated air with the least amount of movement.

7th. That our piping is tested by high pressure and every outfit is fully guaranteed.

8th. That by our improved system of drainage the freezing of pipes becomes impossible.

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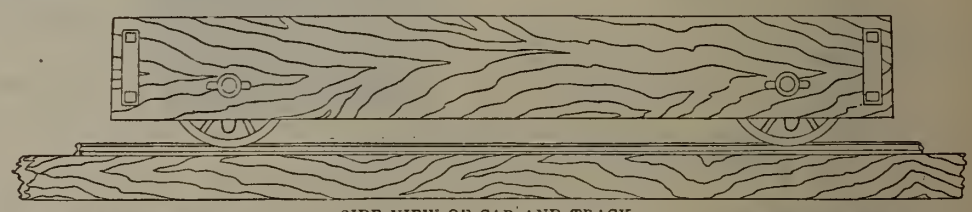
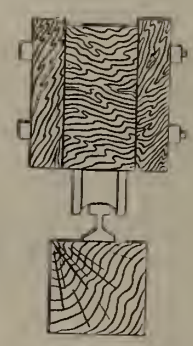
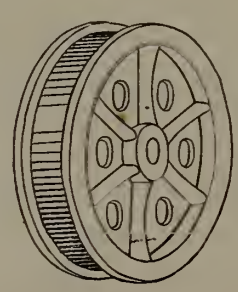


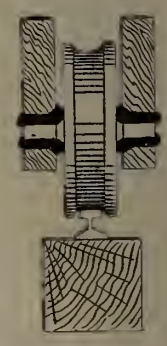
SIDE VIEW OF CAR AND TRACK.



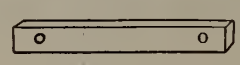
DOUBLE FLANGE WHEEL ON SINGLE TRACK



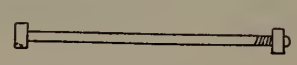
CAR WHEEL, DOUBLE FLANGE



SECTION OF CAR TRUCK, SHOWING AXLE BOX.



STRAP WASHER



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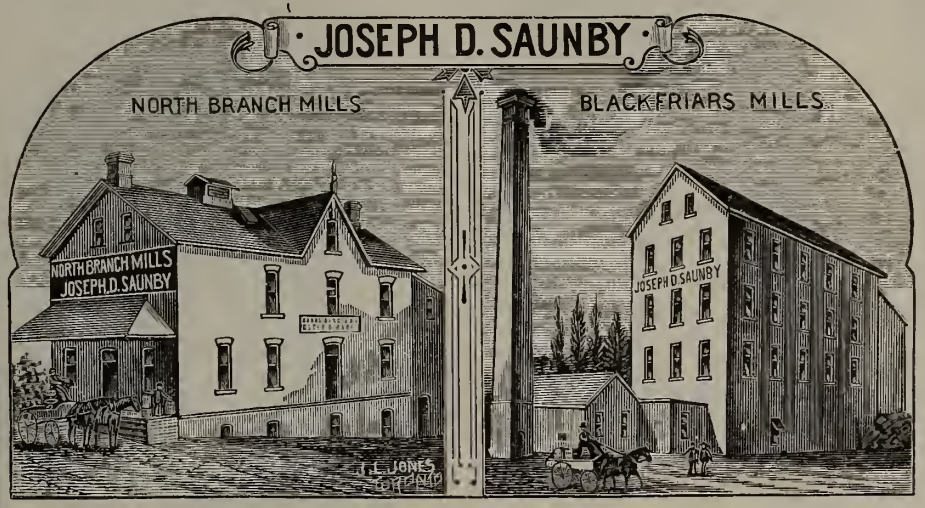

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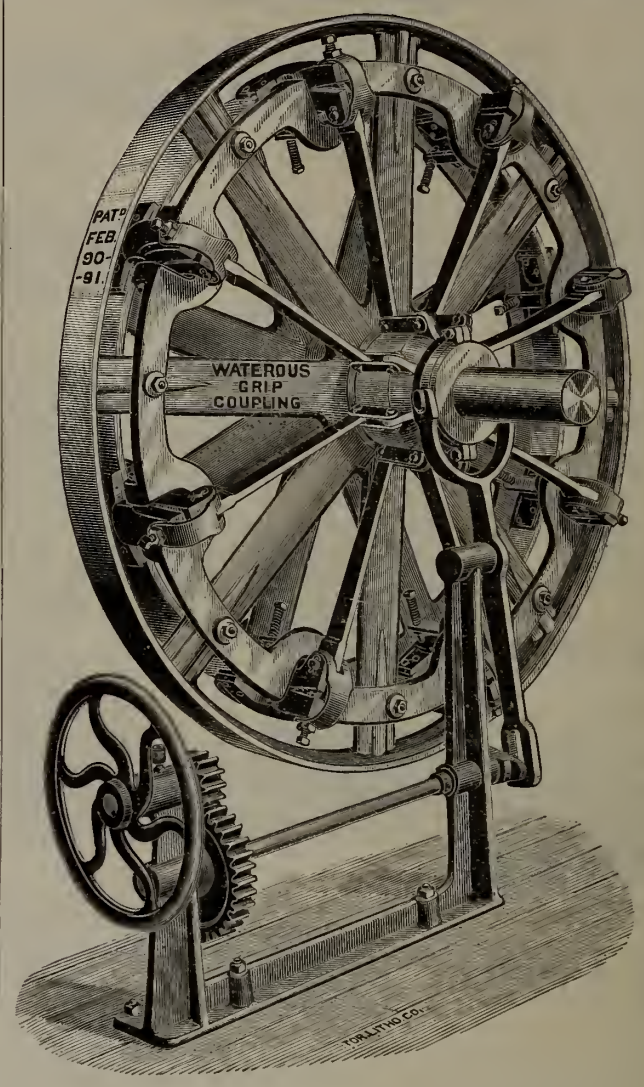

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW

NEW SERIES "MECHANICAL AND MILLING NEWS"

OLD SERIES, VOL. XI. } NUMBER 1.
NEW SERIES, VOL. III. }

TORONTO, ONT., JANUARY, 1893

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OVERWORKED MILLING MACHINERY.

BY LOUIS H. GIBSON, IN "MILLING."

IN conversation with one who has always been intimately associated with milling construction, one who has been quite as instrumental in developing results in connection with the modern history of milling as any one else, he said: "It disturbs me greatly to see what I must see every day in nearly every mill that I go into." "To what do you refer?" was asked. "Primarily," he replied, "nearly every machine in the mill is overworked and few of them are made to do work in quality, which they are capable of doing."

"Does what you say bear any relation to the short system?"

"In a general way, yes. The short system evil had its growth and development from a desire to do a large amount of work with a small amount of machinery. If, instead of shortening the mills and increasing the capacity of the amount of machinery they contained, they had been lengthened, the millers would be in much better shape to-day, in that they would have been able to get more money out of the wheat. This is certainly the aim of every miller's work. There is a tendency among millers at this time to do away with short system methods and to reduce the amount of work which is being done by the machinery of the mills. This change is slow but gradual. It is slow for the reason that the movement is resisted by those who have capital in mills. They do not care to invest in additional machinery. On the other hand they dislike very much to reduce their output. I have in mind the history of one milling establishment which made 500 barrels of flour with a given amount of machinery. As soon as the short system idea impressed itself upon them they increased their capacity to 750 barrels. Now, if instead of doing that, that mill had reduced its capacity from the original 500 barrels to, say about 400, and continued to operate on that basis, I have no doubt but they would have more money to-day. It takes a good deal of courage to go against the face of a general movement, and when a large number of establishments are changing from one method to another, it is difficult to keep out of the swim. This mill was doing good work making a barrel of flour out of four bushels, twenty-eight pounds of wheat, when they were making 500 barrels. When the change was made to 700 or 800 barrels, their yield varied from 4.40 to 4.50, and the quality of flour was not so good. Now, if the capacity of the mill had been reduced from 500 to say 400 barrels, there would have been a large reduction in the yield; as low as 4.22 or 4.20. To be sure they would have had a comparatively large amount of machinery for doing a given amount of work. They would be making a large volume of middlings, however, because of slow grinding, and would have provided large bolting capacity for their clear flour and could have finished up leisurely with a large number of smooth roll or other reductions. This would mean good proportion of patent flour because of the large volume of middlings and because of the improved character of their yield; because of slow grinding, a high grade of clear flour; because of the slow reductions and careful work generally, a quality of low grade flour which would be well up. Thus, on one hand, there would be an improvement in the quality of the flour and again there would be an improvement in the yield. Take the case of the mill which increased from 500 to 700 or 800 barrels. They make very few changes in their wheat cleaning machinery. Machines had an increased amount of work to do without a corresponding increase in equipment. It is true that the mills which I speak of are reducing the relative volume of output, but it will be a good while before they are at the 500 barrel point again, and certainly a long time before they are working on a 400 barrel basis.

"Those who have capital invested in milling are very restless. When they are making 600 to 700 barrels of flour and selling freely, they wish for an increase in capacity, and the capacity which is fixed under pressure, is subsequently maintained as a regular and ordinary capacity of the mill. There was a time when this was somewhat different. Every man that was engaged in milling work knew something about the general practice of milling. Now those who manufacture the product stay in the office and pay very little attention to what is going on in the mill. When the quality of the flour is off, they object seriously, but on the other hand they insist on the work being done in a way which greatly reduces its value. That is, by an increase in capacity. Thus the trade of the product is greatly reduced and in a way that does not show definitely through the buyers. The quality of the flour is greatly reduced and for that reason does not bring positive and immediate claims from them for rebate or damage. They notice, however, in course of months that they can buy equally good flour from other mills which are in general competition, and for that reason the value of the product and the general trade is affected.

"I wish to register the statement that there is being a gradual change made from short milling of all kinds and that it will only be a little while until we will be back from the point where we started from several years ago."

"Do you believe that milling machinery will ever be worked at a capacity less than that of the time previous to the introduction of the short system?"

"I certainly do, and I base my judgment on something more than the fact that there is a general tendency at this time, as there has been in the past, to do away with the short system methods. I base my opinion on the fact that better milling can be done by working machinery lighter, than was done even previous to the inception of the short system idea. It is in milling as it is in everything else; people gradually work around to the best thing, after all. To one who is interested in seeing the best thing done and the one who feels that there is a departure from the right methods, the process of righting is altogether very slow. But, nevertheless, the general movement in all minds is improvement. There are occasional lapses and there are occasional movements backwards, but in the end the right prevails, in milling, as it does in history and in morals."

"You said something about machinery not being worked to the limit of its capacity. Just what did you mean?"

"A good deal might be said about that, but the thing that I had in mind at that particular time was in reference to purifiers. I think I know more about purifiers than anything else connected with milling work, and at the particular time that I was talking to you, I had them distinctly in mind. I will say that I do not believe that one machine in ten is handled as it should be. I am safe in that statement. You can understand just what that means, how true my statement is, when you bear in mind that every purifier, to do its best work should have the cloth evenly and properly covered from head to tail, with the proper size of middlings."

"In how many cases does such a condition exist, and with purifiers as now constructed how is it possible for the ideal condition to exist?"

"A machine which handles middlings must be changed as to its feed from time to time. Occasionally it has the proper amount of work to do; again there is a reduction of the volume of stock. At other times there is an increase. The increase is great occasionally, as any one who is concerned in the practical operation of a mill knows. On a machine which has no proper method of increasing or reducing the working capacity of the machine, it is clear that that machine cannot operate properly at all times, even if the conditions change. On a roll when one puts on more feed the miller changes the set of the roll. The same as in the time of grinding with millstones, when one changed the feed on the buhr he changed the set of the buhr; but on the purifier it merely changes the feed or increases or decreases the volume of stock on the sieve. Sometimes the sieve has the proper quantity of material. Oftentimes it has too much, and again not enough. When the cloth is bare in any one point the operation of the machine is greatly changed. Its efficiency is largely destroyed. There are two vital reasons for this. The efficiency of the purifier is largely dependent on its sieve action. By means of the vibration of the sieve the light particles or bran particles of the middlings are floated to the top. If the top happens to be a bare cloth the bran and other material of that character naturally finds its way through the cloth and hence the purity of the middlings is affected to their disadvantage. Again the efficiency of a purifier is dependent upon the suction through the cloth. If there can be no suction, as there cannot through a quarter or a half inch bed of middlings, or when on the other hand the cloth is bare so that the air can flow up through the uncovered portion and leave the rest without suction, it is easy to see that the character of the purification will be affected thereby. If one bears in mind that the eye of the fan is only eight or ten inches in diameter, it is easy to see what the effect of the bare cloth two or three or four feet square, will have upon the middlings where the cloth is covered."

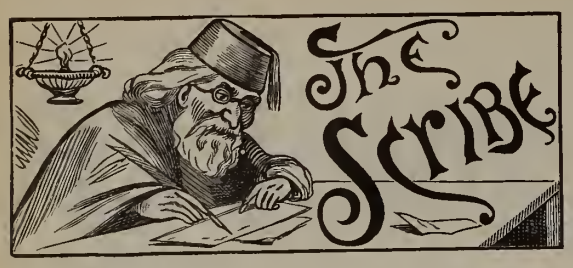
"What would you suggest as a change in the purifier to bring about the proper results? You know a good many machines are made with hangers so that by adjusting them their capacity is increased or diminished."

"That is all true enough, but you know that if a miller has stock traveling over his sieve he is not going to work to change four hangers in order to improve the quality of the product. It is not only too much work but it is liable to make him a great deal of trouble. If the miller can keep the middlings moving over the sieve, that is about all he is going to do unless it can be done easily and with the certainty of making him no more trouble. There is no way more certain of getting into trouble with a purifier than by maneuvering with the hangers. My plan would be to devise mechanical arrangements so that the speed of the shaker could be altered without affecting the speed of the fan or other moving parts of the machine. Thus the middlings could be made to mass more rapidly or more slowly, over the sieve according as the volume required. Another way to secure this same result would be by changing the eccentricity. By changing the throw of the eccentric the capacity of the machine may be increased or decreased. But the mechanical device of bringing about the change of the speed of the shaker or the change in its throw must be exceedingly simple. It should be so simple that it can be done as easily as raising or lowering a buhr with a lighter screw. I am sure I am right about this, as time will prove."

NEW MILLING MACHINERY.

The Dubuque Turbine and Roller Mill Co., of Dubuque, Iowa, have contracted with John Inglis & Sons, of Toronto, for supplying the Hueffner Corrugations to Canadian millers and also to supply the necessary machines for the One-Break Milling System, which has been successfully introduced in the States in over one hundred small mills doing custom work for farmers. Full particulars of these machines will be furnished in the advertising pages of the MILLER next month.

Is there any place where there are more wrong ways of doing the right thing than in a mill?



A WELL-KNOWN grain man of Winnipeg, Man., being asked by a reporter whether wheat deliveries are growing any larger, replied: "I can't say that they are. The ordinary citizen—I mean the man who knows nothing about the grain trade—imagines that the recent increase in prices would induce the farmers to rush to market, but as a matter of fact it is the hardest thing in the world to buy wheat on a rising market. Perhaps the stormy weather has had something to do with it, but it looks as if the farmer was holding off for a dollar a bushel." "They will probably get it?" was the query. "Yes, they will—for two bushels."

* * * *

Mr. Thos. J. Vipond gives an encouraging account of the results of the trips of the steamer America between Montreal and Jamaica last year. It is expected that next summer an additional boat will be added to the service. Mr. Vipond says he has not the least doubt but that Canada can work up a very successful trade with Jamaica; but to do so Canadian manufacturers must go to a little trouble. The United States now monopolize the trade of the island, because its people have gone to the trouble to make goods especially for the Jamaica trade. Take flour, for instance. That supplied by the Americans, and which they claim we Canadians cannot produce, makes a dark heavy loaf which seems to please the natives much better than nice light white bread. The steamship America took down some of Ogilvie's flour during the summer, which made finer bread than that made from the American product, being both lighter and white, and while it sold well, it is not just what the average native wants.

* * * *

The low prices of wheat, grain and flour this season is accounted for by an owner of an American mill of considerable importance in this way: "I believe that the exporting millers are to be blamed for the low values of flour. They have overdone their export business, rushed their mills too fast, glutted their foreign markets and lowered values there, found themselves loaded at home with heavy stocks of grain and flour, and so have thrown themselves on the market here with great lots of their flour. Result: They have broken prices here. Now they are overcompeting, cutting prices, shoving their flour everywhere, and are whipsawed between foreign trade that nets them little or nothing, and home trade that leaves them at best only a small margin of profit. The export millers are more to blame than the 612,000,000-bushel crop of 1891 and the 520,000,000-bushel crop of 1892 for the present low range of values. In fact, these exporters have made their flour cheaper abroad than the grain is. We all lose by their greediness and unbusiness-like methods. If the British mills in Minneapolis made so poor a record on their past year, I predict they will make a worse showing on this year's work."

* * * *

"I have eaten apples that ripened more that 1,800 years ago, bread made from wheat grown before the children of Israel passed through the Red sea, spread with butter that was made when Elizabeth was Queen of England and washed down the repast with wine that was old when Columbus was playing barefoot with the boys of Genoa," said a gentleman of a Chicago club the other day. This remarkable "spread" was given by an antiquary named Gorbel, in the city of Brussels, in 1871. "The apples were from a jar taken from the ruins of Pompeii, that buried city to whose people we owe our knowledge of canning fruit. The wheat was taken from a chamber in one of the smaller pyramids, the butter from a stone shelf in an old well in Scotland, where it had lain in an earthenware crock in icy water, and the wine came from an old vault in the city of Corinth. There were six guests at the table, and each had a mouthful of the bread and a teaspoonful of the wine, but was permitted to help himself liberally to the butter, there being several pounds of it. The apple jar held about two-thirds of a gallon, and the fruit was as sweet and the flavor as fine as though put up yesterday."

* * * *

Two prominent millers are candidates for election to the Council of the Toronto Board of Trade. These are Mr. M. McLaughlin, the esteemed and able president of the Dominion Millers' Association, and Mr. John Brown, one of the most active members of the association. Asked the question what policy he would pursue were he one of the chosen ones on election day, Mr. McLaughlin said that at the request of the millers of the Board of Trade, and there were more millers belonging to this institution than any other class, he had consented to become a candidate. He would, if elected, endeavor to take a broad view of the many business matters that would come before the Board, and he would aim to give all the time possible to the affairs of the Board. Business men were all cramped for time, no doubt, but the affairs of the Toronto Board of Trade were deserving of any attention that could be given them. Mr. Brown holds pronounced opinions on two or three important questions and expressed himself as follows: "I do think the board could have accomplished a good deal more, particularly in the direction of obtaining better terms in the matter of transportation rates for Toronto. I have been deeply interested in that question for a number of years, and that is one of the matters I would give my special attention to. I am also very anxious to have Toronto made a centre for the handling of our mineral resources. Very little has been done in the past in that respect. I would also favor, with respect to the future, any reasonable or sensible movement which would increase the volume of manufacturing in Toronto. I would like to see a more general representation of the industries of the city on Council Board. The milling industry, of which I, if elected, would, of course, be a representative, is next to the lumbering, the greatest in Canada to-day, and I do think that we should have a representative, and also that there should be a fair representation of those who handle heavy freights at the Council Board." At a special general meeting of the Board of Trade, held to consider the question of the establishment of a first-class fast Canadian-Atlantic passenger service, Mr. Brown spoke strongly regarding the transportation of freights. He said: "Canadians were at present at the mercy of the United States in the matter of the transportation of freights. Provision should be made for the carrying of heavy freight. While the passenger department was being looked after the freight should not be neglected. Under present circumstances Canadian shippers were at continual inconvenience. They were obliged to ship their freight over American lines to reach the ports from which the United States freight steamers sail. Of course American freight was given the preference, and when there was a rush Canadian shipments were greatly delayed. If provision were made for the transportation of heavy freight by an exclusively Canadian line, much would be gained by the shippers and merchants of this country. This question should not be overlooked, while the fast passenger service is being forwarded."

* * * *

The charge is not an uncommon one that business men of the day can talk little else than shop. Great Britain has more than once been railed at as a nation of shop-keepers, and yet the best in literature comes from the tight little island across the sea, and a study of this literature shows that much that takes a foremost place in its catalogues has been written by men of affairs. The same is true of other countries, not excepting Canada and the United States, though in these newer lands the main energies of the people are, perhaps, necessarily, devoted to money-making. Dante was a chemist; Villani, author of the best history of Florence, was a merchant; Isaak Walton a linen-draper; DeFoe a tile-maker; Shakespeare managed a theatre; Grote, the historian, and Sir John Lubbock, the scientific antiquarian, were bankers. Voltaire insisted that the real spirit of business and literature are the same. It is, nevertheless, true, the world over, that the development of the literary and intellectual faculties of man are usually subordinated to things material, if not mercenary. What has been accomplished by men of business, who have strayed away from the beaten track, serves to illustrate, however, what the world has lost by others of doubtless equal ability not following in similar paths. To the writer it is always a pleasure to meet with a business man who can talk something besides shop. This was my pleasure a few days ago when I had a call from Mr. T. W. Graham, general manager of the Dubuque Turbine and Roller Mill Co., of Dubuque, Iowa. Mr. Graham is interested in the manufacture of flour mill machinery, and to this extent there was an affinity between us. But a few minutes exercise of memory brought to my recollection the name of Mr. Graham in another connection; and turning to my fyles of Milling—the Century and Harper's of milling magazines in this country—I found T. W. Graham as a frequent and able contributor to this bright and well-conducted monthly. Mr. Graham is a student of tariff reform and has repeatedly discussed the question in his contributed articles. As a practical mechanic we find him at another time writing of "Percussion and Reaction." In a paper on "Competition or Monopoly, Which?" he is contending with vigorous pen against the trend of the age towards monopoly in every branch of business. Whatever the subject written of Mr. Graham has shown himself a master of the English language, a careful student of history and a shrewd observer of current affairs. I say these things not as an encomium on Mr. Graham. That is unnecessary and is not called for—his writings carry their own praise—but with the purpose of, possibly, stirring up MILLER readers to work out some effort on similar lines. "They have their business to attend to every day." So have others. And "they are tired when the day's work is over." Is that so? The widest experience of the world's wisest and greatest workers proves that the best rest is change—complete change of the mental or physical faculties that have been exercised. Try it, brother dusty. In conversation with Mr. Graham I learned that until five years ago he had been a Republican, and supposed that to raise his hand to do away with the protective tariff of his country would be to tear into shreds and patches the whole fabric of the American constitution. He had no such fear to-day. He was a free-trader and had voted for Grover Cleveland at the last election. As a manufacturer he did not fear the competition of either Great Britain or Canada. "I am opposed," said he, "to taxing the many for the benefit of the few, and there is no disputing the fact that this has been the result of protection in my country. Capitalists seem to overlook the fact that as they add to the cost of production in manufacture they are making necessary increased investments of capital to cover this cost and every manufacturer knows what this means. Without this obstruction less capital would be requisite to carry on the individual business and profits would be enhanced. Besides, in adding to the cost of production we are restricting to that extent the purchasing ability of the consumer; in other words the number of purchasers becomes limited to the number who are possessed of the amount called for by the protected, and parri passu, high-priced article of manufacture. A country is not to be made rich by burdensomely taxing the citizens who constitute that country. Agriculturists and millers would certainly be benefitted by freer trade relations, and especially, it seems to me, between the United States and Canada." What is your view, I enquired of Mr. Graham, concerning the contention of Mr. C. Wood Davis and Mr. Erastus Wiman, that within a very few years, less than another decade, the wheat fields of the United States will have become incapable of growing sufficient wheat for your own people, and the republic will have become an importer, in place of, as to-day, a large exporter of wheat. "We have been listening to this same story for years," said Mr. Graham. "I think these gentlemen are out. We are not receiving from the land all that it is capable of yielding, and when the time nears that is predicted by Messrs. Davis and Wiman, our farmers will find it profitable to enter into more scientific farming than they have attempted yet." I learned that Mr. Graham is an ardent disciple of Henry George; a believer in the single tax system as the great solvent of many of the social ills of the day.

VIEWS AND INTERVIEWS.

An Antique Mill.

A Washington exchange tells of a flouring mill in Astoria that is not the very newest thing out; it has little acquaintance indeed with the full roller process or middling purifier attachments. The student of ancient history would recognize it as one of the household articles in common use at the time Pharaoh's daughter adopted Moses, but this mill was imported from China by Sun Yuen Lung, a Chinese merchant of Ocosta, for the purpose of grinding rice. It is not stated whether he will do custom work for the natives and take toll, or simply keep it for his individual use.

Trade Winds.

Nothing could be more commonplace than the saying that change is the order of the day. How wonderful have been the changes in all departments of life within the past quarter of a century, yea, inside of the last decade. A recent writer, noting the changes that have taken place in various branches of business, remarks: "The most noticeable as well as notable of these changes have been the altered methods of transporting freight at sea. Although the shipping of grain dates back considerably beyond the period we have mentioned above, it is only during the past fifteen years that the movement has reached its full development. All classes of grain now pass from the hands of producers to those of consumers in foreign countries without the aid of packages of any sort, and without hand labor to a considerable extent, the grain being transferred from cars and barges, in which it has been hauled from the interior in bulk, by means of elevators, either direct into the holds of vessels or into the bins of storehouses to await shipment. By far the most interesting evolution, however, has been the gradual abandonment of the barrel as a package. Flour, which was formerly always packed in barrels, is now put up altogether in sacks when intended for export and the barrel is also to a great extent being replaced by the sack for the domestic trade."

Business and Morals.

The science of homiletics is not alone the work of the moralist. Morals have their place in all walks of life. Business and morals—separate them as some will endeavor to do—have a close affinity for one another. The business that is immoral should certainly have no place in the business of a country, and one may well look askance at the business man who decries the application of moral principles to his methods of transacting business. The old saw, "honesty is the best policy," is an acknowledgment of the place that morals occupy in business. The tenets of this adage are perhaps not the highest, but the exercise of its teachings in business gives force to the conclusion that even in business the right way is the best and only safe way. The business man needs not be constantly assuming the role of the preacher. It is hardly business-like for him to do so, at least in an ostentatious manner. Yet the more closely his methods are shaped on these lines, the more healthful, even from a financial point of view, will be the outcome of his business operations. And the business of a community or a country being simply an aggregation of business units, the better will it be for that community or country when the business units, as one man, exercise in private and public transactions the healthful points of the saying, "honesty is the best policy."

The Cheap Miller.

It has been long demonstrated by careful students of the labor problem that there is no economy in the employment of cheap labor. In those countries where wages are low—take Mexico or India for example, though far distant from one another—the actual nett returns for the wage outlay is less than where wages for similar labor is many per cent. higher. In America and England wages average the highest of any countries in the world, and the return from this labor is the most profitable. Skilled labor is employed in the one case, and skilled labor is productive labor; unskilled labor is employed in the other case and there is no productive result. Milling is no exception, and the Southwestern Miller touches the question with vigor and intelligence when it says: "Of all false economy schemes the cheap miller is the worst; and although we have been looking for the phenomenon for long years we never have been able to see what a mill owner is trying to get through him when he hires an incompetent miller rather than the competent one because the former agrees to work for twenty-five or fifty cents per day less than the latter. Taking it from a standpoint of value of flour product alone—saying nothing of yield or economical work, fuel, wear and tear of machinery, etc.—and in the small mill of twenty-five or fifty barrels per day capacity a saving of one cent per barrel pays the difference; and oftentimes a good miller will make up the difference of twenty-five or fifty cents in the day's wages on each barrel."

Do it To-Day.

"Do it to-day," says a writer in the Merchant Sentinel. "Meet the day's demands with promptness regardless of their seeming insignificance, for there is no better way to place your name between the lips of undesirable business gossip than by showing this lack of promptness in small matters. This does not alone apply to the strictly financial part of your work. There are thousands of opportunities which present themselves where it is possible for the business man to take advantage of the "stitch in time saves nine" axiom. The "stitch" is but an insignificant factor in the make-up of the long, binding seam, but the neglect of the one broken thread, and procrastination's prevention of its prompt repair, is the ruination of the entire garment. So we find men in their business transactions constantly "putting off" that which should be done to-day until an accumulation of the little neglected details form an aggregation with a crushing weight, when the time comes that circumstances give the mandatory command. It must be done! How often do we hear the merchant who is his own book-keeper lamenting an unpardonable negligence in himself—in the matter of keeping his accounts entered up to date and his books in a condition of intelligent management. A negligence which he would not tolerate in any one in his employ. So easy is it to thoughtlessly "put off" that which does not make a peremptory demand upon our time, that we are liable to fall into the habit of being behind the details. Better, by far, be ahead of time than constantly lagging. Do everything as it presents itself, for just as sure as you "put off" until to-morrow, your time will be fully filled by the duty of the day and you have lost the only opportunity of life open to the neglected work."

GOOD AND BAD BELT FASTENINGS.

A MAN had occasion, says a writer in the Tradesman, to pass under a twelve-inch rubber belt which drove a certain part of the mill. This belt was fastened by means of small links, similar to those used in an endless chain. The links were put through holes cut one inch from the ends of the belt, and in putting the belt together the ends are placed together so that the holes are opposite to each other. Then the links are forced through and a piece of iron wire put through the holes in the links so as to bear on the outside surface of the belt. This device forms a joint which stands straight up from the pulley about 1⅛ to 1½ inches when the belt is running. The man who was hurt was just passing under the belt when the joint came along and struck him on the top of the head. It took off a piece of the scalp about as big as a dollar, cutting it clean in three sides and leaving it hanging by the fourth. It knocked him senseless and it was several days before he was again fit for duty.

Such belt fastenings as these are an abomination that are as dangerous as a powder mill. All belts should be boxed up, but a belt with one of these things travelling around it should be cut in pieces and thrown into the boiler furnace. The link fastening is cheap, is quickly put into a belt and as quickly taken out when necessary to take a piece out of the belt. Boxing up will protect the operatives from the belting, but it will not protect the millwright or the repair man whose business it is to monkey around belts and shafting when it is running.

The instance mentioned above was a bit of personal experience of the writer, the man who was hurt being one of his workmen at the time of the accident. The owner was entreated to provide different fastenings, and after a great deal of grumbling some brass belt studs were provided, also a ring for making cement joints, which is the best possible way of splicing a belt. The belt studs are little brass concerns having a T-shaped head on either end, being made about ½-inch wide and of a length sufficient to pass through two thicknesses of the belt to be fastened. Brass belt studs can be procured in the market of various lengths from ⅜ to nearly two inches long. They can be quickly put into a belt and just as quickly taken out, and when properly put in and adjusted will hold equal to the best sewed lacing that can be put in. The heads of these belt studs do the work done by the wires when the iron links are used as described above, but the studs do not cause the belts to stand up and make a scalping machine which is liable to maim or kill. To give an example of how well this stud does its work, it may be mentioned that a belt can be put together with these studs, and, after running a few days, and perhaps even hours, the stud holes may be cut completely out through the ends of the belt, but the studs will still hold perfectly, owing to the grip obtained by their heads on the outside surface of the belt.

After these studs were procured, they were put into all the belts around the mill, which were liable to need frequent taking up, i. e., one joint was made with the studs and all the rest of the belt (for there were several pieces forming some) were permanently cemented together, making practically an endless belt. The cementing outfit consisted of an ordinary glue pot with water jacket and lamp underneath. This could be used when necessary, but it was usual to place the glue pot on a steam pipe a few minutes before desired for use. In the glue pot was placed two parts of best common glue to be obtained and one part of fish glue. This forms a mixture which will hold leather so well that when torn in two after having dried thoroughly, it will split in a new place even more frequently than it will in the splice. A piece of smooth pine board, two feet square, a smoothing plane and a chisel, a hammer, a few tacks, together with a strong knife and a square, completed the cementing outfit. There must, however, be added to this list a pegging awl and a supply of pegs of different lengths.

The operation of cementing a belt is very simple. First, the belt is squared and cut perfectly true upon the end; then a mark is made back from the square end a distance equal to the width of the belt; then the belt is tacked upon the board so that the end comes just even with the edge of the board. By means of the plane the belt may be easily chamfered down from full thickness to anything wanted. Both ends of the belt are served in this manner, taking care to carve each end on the right side, also making sure that there is no twist in the belt when it is brought together ready for cementing. Secure one end of the belt to the board by means of a couple of tacks a distance above the butt end of the splice, then warm the leather by some means, either by holding over a lamp or by means of a hot iron. When as warm as will bear the hand comfortably, proceed to spread on a coat of the glue, which should be moderately thick, a little thicker than is used for gluing wood. Give both surfaces a coat as soon as possible, then put them together and hammer lightly with a broad-faced hammer. When spreading the glue, it must be made sure that the entire surface of the leather is coated, and coated evenly at that. Any little corner left without glue will be a defect in the work and a source of continuous trouble.

Having made sure that the surfaces are thoroughly covered with glue, place together as above described and hammer lightly until all parts of the surfaces have been pounded together. With the pegging awl, mark a row of holes about three-quarters of an inch apart all around the splice. Drive pegs into these holes as fast as they are made, and use a length of peg which will just go through the leather and leave the pointed part projecting. Allow to dry a few minutes, then trim off the pegs with a sharp knife and the belt is ready for use. It would be better to allow it to stand over night if possible, but many times it is not and the belt is doing good work within half an hour after completing the splice.

Neither affrontery nor unbridled audacity can safely be substituted for earnest determination.

THE Canadian MILLER AND GRAIN TRADE REVIEW

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

CHAT WITH SUBSCRIBERS.

PURSUING the policy that regulates every well-conducted business, we enclose in this month's CANADIAN MILLER accounts against individual subscribers who may have, amid the festivities of a holiday season or the excitement of a municipal election contest, overlooked the fact that they have not remitted the year's subscription to their own trade journal, for the CANADIAN MILLER is essentially the miller's journal. Our subscription books should show a clean sheet on first of February, and all that is needed to make this a fact is for each individual concerned to attend to this little affair now. The successful business man attends to-day to the affairs of to-day.

ANOTHER MILE-STONE.

THIS number of the CANADIAN MILLER marks the commencement of the eleventh year of publication, a record that reflects not uncreditably on the trades for which the MILLER essays to speak, and we may be permitted to add, nor on the journal itself. Horace Greeley once declared: "The success of a newspaper depends largely, very largely, upon the friendliness and co-operation of its constituency." And the MILLER has reason to believe that its success during these ten years, and more particularly, the enlarged success that has come to it, within more recent years, has been due to the cordial and friendly relations that have always existed between the paper and its readers. We shall continue, during the new year, to make the MILLER of increased value to the milling and grain trades in the broad field it now occupies, and thus continue to merit, by actual doing, the many kind words that are spoken of it.

* * * *

In the special holiday number of the CANADIAN MILLER issued last month we took occasion, some days in advance, to wish our many readers a happy and prosperous New Year. We repeat the wish, as we greet them at this time in the first number of the new year. 1892 may not have been the most successful year that has come in the walk of the milling trades of this country. But if it has had its shadows there is reason to believe that the new year opens with the light breaking in, and a prospect of better times ahead.

CROP REPORTING.

EXACT as is supposed to be the work of the statistician in the present day, we have, nevertheless, frequent illustrations, in the history of crop reporting, of the faulty character of many calculations made by those, whose figures are, it is claimed, framed on so scientific a basis, that they cannot possibly be wrong. A late illustration is the case of Statistician Dodge, of the United States Bureau of Statistics. It has been shown to a demonstration that recent crop reports compiled by him have been altogether askew with actual conditions. Those, who have given the subject of gathering crop returns any thought worth while, will recognize that the work is beset with difficulties. There is, for one thing, the speculative character of the grain business, the bull and the bear element, which impels some to mislead in the imparting of information for statistical purposes, and influences others, who may be in possession of certain knowledge, to withhold it for the time, or falsify the record that is presented. But the greatest obstacle to securing exact returns is the breadth of the field to be covered and the amount of detail connected with the work, if it is to be rightly done. It is a mistake to suppose that the real conditions of a season's crop are nearly ascertained when all the information possible is obtained from the elevators and shipping centres, which much of the grain reaches. No system of crop returns is complete that does not get at the farmers of the country, as nearly as possible as individual farmers; for, as the Milling World has pointed out lately, there is a vast amount of wheat in the country of which no account is made in any "visible supply" tabulations. Our Buffalo contemporary supports this proposition by quoting from three letters from farmers in Minnesota. One of these reads: "I have 2,400 bushels of wheat; holding for better price. Four farmers east of me have over 7,000 bushels. Three next to me on the west have 6,000 bushels." The second letter tells of over 35,000 bushels on 15 farms, and the third tells of 24,000 bushels on 12 farms. Here are about 75,000 bushels held on 35 farms in two counties. Very pertinently the question is asked: How many counties in this and other states would reveal the same thing in a greater or less degree?

The remedy suggested is a system of crop reporting by school districts, townships, counties and states for all crops. "If crops are to be reported at all," says this journal, "they should be reported as fully as possible."

It would be too much to say that the Bureau of Statistics, of the Ontario department of Agriculture, is beyond improvement in the methods adopted for securing crop returns in this province. Yet a careful study of the methods employed, in contrast with those of other countries, indicates very clearly a belief in the proposition that "if crops are to be reported at all they should be reported as fully as possible." The principle with the Ontario Bureau is, to quote its own words, a "direct census" of conditions furnished by the individual farmer in the individual school section. This must be the ground work of any successful system anywhere.

SAFE SPECULATION IN FLOUR.

IT is sometimes contended, with many a grimace, that trade methods on this side of the Atlantic—as is supposed to be the ways of this newer country—are woefully demoralized. And it is true enough that we do oft-times forget those rules of decency and good sense that should govern men who essay to be leaders and princes in commerce. When in the dumps over these conditions we point to good old England where they do things different, so different, and whose traders are guided by sound economical principles and not the slipshod methods that not unfrequently influence ordinary mortals. We are prepared to admit that the business men of the mother land, in many respects, take higher ground in the conduct of business affairs than do those, sometimes, of other countries. But in reading a recent article in the Millers' Gazette, of London, Eng., headed "Safe Speculation in Flour," from the pen of the well-known milling writer, Mr. W. T. Bates, we are forced to the conclusion that there are as foolish and unbusinesslike things done in England as are done at times elsewhere.

Mr. Bates informs us that there is a large amount of speculation in flour, especially in London, but unlike all other forms of speculation, a reversing of the general rule, there is no speculation or chance in these deals in flour. How the business is managed is told by Mr. Bates in these words:

"I am a baker, doing, perhaps, ten sacks a week, and scarcely able to keep square. At any time which I think favorable I can buy from different millers enough to last me six months—aye, two years. I make no agreement or stipulation as to when I shall take any or all of it. If the price should go against me I may decline to see my millers, or put them off. I may, if I choose, complain of the quality, and decline to take any in until it suits me, which may be in months or years. But if, after a long interval, markets should change in my favor, I can demand my bargain, which the miller has thus considerately carried for me, without the slightest cost to me, but at a great expense to himself. I am quite different to any other speculator, for I neither pay for my bargains, pay no differences or interest, so I am a sure winner. I win, but what then? Well, the flour which I bought at a low price enables me to undersell my less cautious or more scrupulous competitors. I give the public the benefit, and pay my miller, if I can. Yes, it may injure my neighbors, and it doubtless will injure the miller—for I can and do sell his flour cheaper than he can." Fancy a man being undersold by himself—and yet it is frequently done. A small miller told me he had sold ahead three months, and was carrying that load with great difficulty. "But," he added, "if I do not sell when the bakers are buying I cannot sell at all." Another instance is given of a medium-sized mill having 20,000 sacks of flour sold, a load that is being carried with much inconvenience, and must continue to be carried for an indefinite period. Almost without an exception this is the order of business with the millers of the great metropolis. The same custom has been followed to some extent in Liverpool and other cities, but nowhere have the conditions been as aggravated as in London. In Liverpool a start has been made in the direction of curtailing forward sales and the suggestion of Mr. Bates is that the millers of other cities take united action on similar lines. It is wisely proposed that no forward sales be booked for more than one month.

Not very long ago English millers were in the habit of loaning their sacks to the bakers, taking their chances of getting them back, and losing immense quantities of them. "They now charge a uniform rate of 1s 6d each, with just as much satisfaction, now they are used to it."

We do not know, nor is it intimated by Mr. Bates, what pull the bakers have on the millers to force them to adopt this ruinous policy of forward selling. But to the average man it seems strange if so one-sided a deal cannot be broken, and that in very peremptory fashion, and thus "free the trade from an unendurable incubus."

BRANDED "MANITOBA" FLOUR.

MILLERS of Manitoba make the charge that Ontario millers are branding as "Manitoba" flour that which is not Manitoba flour. The Commercial, of Winnipeg, states the grievance thus: "The placing of flour ground in Ontario mills upon the market as Manitoba flour, is quite a serious matter for western millers in these days of unprecedentedly low flour prices. Ontario millers are getting their wheat proportionately cheaper than Manitoba millers. The eastern millers are buying wheat at their mills at a price only about 10 to 12 cents per bushel lower than prices in Manitoba. When the freight rates from Manitoba points to eastern markets is added to the Manitoba product, there is a large balance in favor of the eastern miller. Manitoba flour, on account of its superior quality, however, commands a higher price than that manufactured from eastern wheats, and on this account western millers are able to dispose of their product in eastern markets. Manitoba flour will therefore sell in the market with Ontario flour, on its merit; but when the latter is put up and branded as Ontario flour, the competition is placed upon an unfair basis. The Commercial is informed that some flour dealers furnish sacks to eastern mills, which are branded as Manitoba flour. Of course there are eastern millers of established reputation, who grind Manitoba wheat for mixing; but there is no doubt considerable flour sold from unknown mills, and branded Manitoba, in the manufacture of which no Manitoba wheat whatever has been used. This is not only an unfair competition for western millers, but it also injures the general trade in Manitoba flour by giving a false impression as to the quality of the latter. The question is at present in the hands of the Winnipeg board of trade, with a view to securing a remedy, if possible, thought this will be a difficult matter to do."

ONLY BEST METHODS SUCCEED.

THE shrewd manufacturer, in whatever line, recognizes the difficulties he is laboring under, if, for any reason, he is holding on to methods and machinery, that have been supplanted by something newer and more efficient. Just as truly as the mill cannot grind with the water that is past, neither can the miller, employing the mill machinery of an age now consigned to the archives of the past, compete, with any measure of

success, with the modern furnished mill of to-day. Milling business in the United Kingdom according to Milling, of Liverpool, is suffering from just this want of better methods of handling grain. "Grain handling, of an efficient and economical character," says Milling, "is clearly one of the crying needs of the grain trade, and especially for millers. So long as the volume of imported flour continues in anything like its present ratio, so long may we conclude that the milling in this country is deficient somewhere in ability to keep it out. Undoubtedly we are behind in one department, the automatic and economical handling of our grain. Except in large—for the most part new—establishments on, or accessible to the coast, grain elevators and silos are the exception and not the rule."

Following along in the same line of thought our contemporary philosophizes on the possibilities of changes in the future in the roller mill process of milling: "King Millstone's long reign is over, but does it follow that his younger rival, the Roller Mill, will keep his place unchallenged. So far, roller systems have held their own against all newer methods. Discs, Schrot Machines and the like, have come and gone, have had their day and disappeared, but the restless inventiveness of modern days still threatens to renew the battle which is waged from time to time against what now holds the field. The phases of roller milling in this country since 1868 have been many and various. The Buchholz system commenced with a method of decorticating wheat, which has never been surpassed. This, followed by a brush machine, was adopted before the first reduction on fluted rollers, and despite the crude ideas combined with the system, there was much to recommend it. Ten or twelve years later the pendulum swung quite the other way, and cleaning wheat was, in many cases, of no account at all. Splitting the grain by means of fluted rolls to let out the "crease dirt" became the rage in every case. The "crease dirt" theory is quite exploded now, and other "fads" take its place."

EDITORIAL NOTES.

AN exchange remarks: With prices for flour at the 1892 level, it makes a miller in this country green with envy to read that flour is selling at Caracas, the capital of Venezuela, at $30 per barrel, wholesale. Our millers have not had very much velvet of late.

A SCOTCH engineer is said to have solved the problem of making the mill run with the water that has passed. An arrangement has been effected by which all the steam used by an engine is returned to the boiler. As a result it is said that as much energy can be gotten out of one ton of coal as is now secured from seven.

VIEWING the situation 3,000 miles away the Mark Lane Express says: "The best means of dealing with the question of agricultural depression is shown in America, where a farmers' party has been formed. It is to be hoped that at the next general election, English farmers will follow the American lead." We suppose the reference is to the new People's Party of the United States. Certain wrongs of the agricultural classes may be redressed through the influence and agitation of a well-organized political party, but the farmers of the republic still wait for the greatest of all boons—high prices for their produce. Will the People's Party give them this?

WHEAT-GROWING in the Antipodes does not make the progress that many might be led to expect. The London Miller, in a recent article, says: "The need of irrigation makes many holdings expensive, and the persistency with which labor clings to the great towns makes rural wages range exorbitantly high. Fourteen years ago the acreage was roughly calculated at three-and-a-half millions and the yield at thirty-five million bushels, and from this mean the deviation has not been great. The expanding industry and developing agriculture of a new country will be looked for in vain, but the national debt to be borne by the settler has risen nearly a hundred millions sterling."

A REPORT has been issued by Dunlop Bros., of Glasgow, Scotland, saying that in a comparison made this season between Duluth and Manitoba wheat the latter has received a decided preference. The report goes on to say that Manitoba wheat is handsome, heavier, and in every way much more attractive than Minnesota wheat. Manitoba No. 2 hard has become popular in the English and Scottish markets. What is not without significance in this connection is a statement of a Duluth paper that within the past two or three weeks nearly 2,000,000 bushels of Manitoba wheat has been sold in Duluth for May delivery. This is a much larger quantity than has ever reached that port before. Last year about 1,000,000 bushels of Canadian wheat reached Duluth. The wheat this year will reach Duluth by way of Winnipeg, and has been bought by three houses. The price paid was about two cents per bushel less than the market rate at Duluth.

THE millers of Victoria, Australia, are moving in the direction of a Victorian Millers and Flour Agents' Association. As with millers everywhere they are experiencing the necessity of members of the same trade combining for mutual service and protection. Canadian millers, through the Dominion Millers' Association, are ready to testify to the benefits of such an organization, both indirectly as a means of enabling the members of the trade to become better acquainted with one another; and directly in the money it has put in their pockets through the office of the Central Wheat Buyer, and in other ways. The Australian Miller wisely remarks: "Combination of the members of the Trade for mutual protection can result only in mutual benefit. What is necessary to enable it to be carried out is that all should exercise a little tact and forbearance in the first place, and should determine in the second to observe loyally the policy ultimately adopted."

THE Winnipeg Commercial is of the opinion that the manufacture of macaroni is an industry which might be carried on to good advantage in Manitoba. Macaroni is manufactured from wheat, but only a particular class of wheat is suitable for the purpose, and our northern wheat should possess the required properties to a remarkable degree. Macaroni is made more largely in Italy than anywhere else, and also largely in France, and on this account some may suppose that it requires a soft southern wheat to make macaroni. The fact is, exactly the opposite is the case. The Italian and French manufacturers bring their wheat from a province in Russia, which produces a very hard and flinty wheat. The flintier the wheat, the better the quality of macaroni produced. We should be able to produce a wheat here which would excel even the Russian wheat in these properties. Large quantities of macaroni are consumed in various parts of the world, and the industry is an important one.

THE unexpected increase in the price o. May wheat a few weeks ago has given rise to considerable conjecture as to what the increase means. The Toledo Produce Exchange Report has prepared the following table of the price of May wheat on December 1 and the price of cash wheat on May 1 for ten years, which is interesting reading in this connection:

	Price of May. Dec. 1.		Price of Cash. May 1.
1891	102 5/8	1892	90 1/4
1890	102 1/4	1891	112 1/4
1889	86 1/4	1890	92 1/2
1888	107 1/8	1889	88
1887	89 3/8	1888	89 1/2
1886	87 1/2	1887	84
1885	99 3/4	1886	86 1/2
1884	78	1885	106
1883	112 3/4	1884	99
1882	98 1/4	1883	114 1/2

It will be seen from the above that in six years out of ten, buyers of May wheat in December lost the carrying charge. Also, it will be seen that on December 1, 1884, the price of May wheat was 78c., and on May 1 following the price of cash wheat was $1.06. But that don't prove much, because on Dec. 1, 1885, May wheat was 99¾c. and on May 1 following wheat was 86¾c. On Dec. 1, 1883, May wheat was $1.12¾, and on May 1 following cash wheat was 99c. The useful lesson of statistics must be learned in connection with the existing facts and influences bearing upon them at the date of occurrence.

MECHANICAL HINTS.

WE often see engineers when they are about to pack a valve or piston rod, and their packing is a little large, hammer the packing flat, so that it will go into the gland. This is a bad practice, for it breaks the strands of the packing, cuts them in fact, and does not improve it in any way. Instead of this, just take it to the vise and press or squeeze it out as flat as you wish. It will be more even, will pack better and will not have ruined the properties of the packing. Try it once and see how much better it is than hammering. If the jaws of the vice are too short for your work, you can easily arrange some false jaws for this work, either of hard wood or soft metal.

Don't go working around a shafting with anything that can possibly catch in the belts, pulleys or couplings If you wear an apron, take it off when at this business, as it is a trap, for if the material does not give way you are liable to go sailing around the shaft, not a very pleasant journey to contemplate. Don't wear a jacket or shirt with ragged sleeves, or, in fact, any projections that could tempt the revolving set-screws or key-ways. Of course, no such things should be around a shaft, the day for that is past, but do not be careless even if there are no such traps around the shop. In these days of wooden split pulleys that require no set screws to hold them on the shaft, there is little excuse for key-ways or set-screws that lie in wait for victims. When it is necessary to use set-screws, as in collars, etc., let them be countersunk, so as to present no projecting heads, let key-ways be filled with wooden strips outside of the pulley, and, in fact, take every reasonable precaution for the safety of the men whose duty calls them around the machinery, and on whom depends the successful running of the plant.

There is much unnecessary carelessness in a good many establishments, and much more danger than is necessary to the running of the plant. In one place that the writer knows of they have left the covers off the shaft couplings, leaving the bare bolt heads and nuts exposed to catch any one who comes near. The cover came with the coupling, but was left off from pure neglect; probably because they did not need it for a driving pulley. It must not be thought that all the blame lies with the foreman or proprietor, for such is not the case, and we often find the men leaving, from pure neglect, things undone, which leave a danger for their companions.

For instance, the scaffold may not be put up strongly because the man who put it up thinks it doesn't need any more nails, or his nail box may be empty and he forgets to go up there again and put in more; then somebody falls and the verdict is: "Unavoidable accident;" but there is some one to blame nearly every time. Don't let it be you.

MILL REPAIRS.

THERE is a wide difference with men in the manner in which repairs are made in different mills. A skillful mechanic and machine operator is always satisfied when a machine is doing good work, and is quite willing to let well enough alone; others seem to delight in constantly tinkering with the machines, whether they really need it or not. With the former, when a part is broken or worn out, he is never satisfied unless the part supplied is the exact duplicate of the other, both in style and finish; the latter seem to delight in patching up broken parts, frequently in anything but a skillful and mechanical manner. With such men it only becomes a question of time when the machine will become a scrap-heap and comparatively worthless, so far as its value in the market is concerned, whereas, if the repairs had been made in an intelligent manner, a machine, after eight or ten years' use, should possess nearly its efficiency and value as a second hand machine, provided it were changed for a new one, and the legimate repairs would, probably, not have cost the proprietors any more than the tinkering.

Milling in the towns near the head of Lake Superior promises to grow to enormous proportions in the next year or two. All the plants in prospect for Superior and Duluth are of the gigantic order. Minneapolis needs to hang on to her "supremacy" crown with both hands or some of her rivals will snatch it from her.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

MORE ABOUT THE WEST INDIES.

THE attention given by the CANADIAN MILLER, of late, to the flour trade with the West Indies, has been suggested, largely, by the attention the West Indies people, themselves, have been paying to the question. Recently a committee of the Royal Agricultural and Commercial Society, of British Guiana, took evidence touching the character of our flours, as compared with those of the United States. Two facts, at least, have been established as a result of this inquiry: (a) The existence of a very friendly spirit towards Canada, creating, as the Daily Chronicle, of Georgetown, British Guiana, has it, "A desire, all other things being equal, to deal with those who are bound to us by the ties of a common race." (b) That United States flour has obtained a good footing in the Indies, but despite the spirit of patriotism,which has its influence with these sister colonists, there is the natural prejudice and aversion, common to all peoples, of making a change. "It is, therefore," quoting again from the Georgetown Chronicle, "easy to arrive at the conclusion that, if Canadian flour is to hold its own in the West Indian markets, it must do so upon its merits." Sentiment may have its influence in securing business, but standing alone it is a poor article of commerce.

How far then has the inquiry of the Royal Agricultural Society established the merits of Canadian flour? We take the conclusions of our Georgetown contemporary, which has evinced a friendly spirit throughout to Canada, as furnishing one reply. "When we are met with the query: 'Is there any reason why Canadian flour should not be generally used in the British West Indies?'" says this journal, "we are inclined to meet this question with another, and to ask: 'Is the Canadian flour as good as that which is imported from the United States?' Now, any of our readers who have gone to the trouble of studying the evidence on the point published in our columns, that was taken before the committee to which we have referred, is bound to come to the conclusion that, whatever may be its merits before it leaves Canadian ports, it does not arrive here in as good condition as the flour that is sent to us from the United States. This is a fact the testimony given by competent authorities proves, and proves most conclusively. But it has not been shown that the commodity is not equal to the best American flour before it leaves Canadian ports; in fact, the natural inference derivable from the evidence is that it is quite as good, if not better. Most, if not all, of the evils appear to be of a nature that may be remedied; not, it is true, without some trouble, and certainly not all at once, but most assuredly in process of time. All of these difficulties appear to have their existence in the method of packing and the means of transit. And when the Canadian dealers consider this fact, there is little reason to doubt but they will endeavor, and endeavor in all probability very successfully indeed, to suit themselves to the Colonial market." The Hon. A. Weber, chairman of the committee of inquiry, concludes that there is no remarkable difference between the flours of Canada and the United States, "that if Canadians would send good brands and pack it suitably for that market, their flour would go down just as well as that from the States." The testimony of a Mr. Edwards was in these words: "If those samples I had from Donaldson's were put into American barrels and sold here they would be appreciated as well as any flour on the market, as an extra flour."

The demerits of Canadian flour is not in the flour itself, but in the manner in which it is packed. Nothing, in the inquiry, has been more clearly demonstrated than this. The flour, it is alleged, "is less concentrated in the barrel, than the American, and for this reason is more likely to sour. The wood the barrel is made of attracts more air than the other. The air gets at the flour somehow." But the flour itself, our West Indian friends freely admit, is all right.

The packing is a difficulty millers can readily overcome. Once overcome, conditions are largely in their favor, and success will depend upon the measure of effort they are prepared to exert.

BUCKWHEAT MILLING.

"In these times when the profits on the manufacture of wheaten flour have been reduced to a minimum," says the Miller's Review, "it is a matter of interest to the miller to examine into any special branch of the trade, which will yield a good and satisfactory return. We have always advocated specialties in milling, as they are generally recognized by millers as offering good sources of income, and withal require very little expense in providing the necessary machinery. There is probably no grain which pays a better profit in its reduction than buckwheat, as it is to some extent a luxury, and one which is becoming more popular with each succeeding year. The popular handling of this favorite grain, therefore, so as to meet the demands of an advanced taste, is a matter worth careful consideration upon the part of the miller, as a favorite brand of buckwheat flour is pretty sure to meet with a ready demand at good prices."

CHEAP FLOUR.

"A good family flour ground from Ontario wheat," says the Montreal Trade Bulletin, "is being sold by a Montreal miller at $1.40 per bag of 98 lbs., which is the lowest price ever before known, and the same flour is being sold in Quebec at $1.44. These low prices mean a tremendously increased consumption, as wheat and bread are about the cheapest food staples for both man and beast at the present time. When spoken to in reference to the quality of the above, the miller referred to said: "You have eaten bread made from worse flour than it, which is a good wholesome article." It is very certain that the people of Quebec never enjoyed such privileges in the shape of cheap food before, and indeed the same remark may be applied to the people of the whole world. It is stated that at the low prices ruling during the past few weeks some cheap lots of flour have been picked up and put into store, for a higher market, as it is not thought possible that prices can go any lower. This, however, has been thought so often before, and acted upon, that those who have hitherto pinned their faith to that belief have become disgusted at the manner in which they were deceived by the untoward turn in prices. Still, it is certain that a rock bottom basis must be reached some time, and it is equally sure that if it has not already touched it, the time cannot be far off when it will, as there can be no profit to millers or the producers of wheat. Speculation, which has lain dormant in the flour trade for a long time past, is evidently beginning to arouse itself, as we are in receipt of letters from a milling firm in western Ontario, stating that Toronto and other buyers are bidding $3 f.o.b. freely for straight rollers, some of whom would contract for 5,000 to 10,000 bbls. if they could secure them for that figure. Millers, however, are asking $3.10 per bbl. f.o.b. London and Liverpool buyers have been enquiring for Canadian flour, and although at low prices, there appears to have been a disposition to advance rather than recede in their cable limits. There has of late been some unprecedented slaughtering of American flour in the English market, Minnesota bakers having been sold at 18s to 19s. notwithstanding that the regular quotations for that class of flour at the time was 21s 6d to 22s 6d. Some Canadian red dog was also sold in Liverpool as low as 10s 3d and 10s 6d per sack of 280 pounds, which are said to be the lowest prices ever experienced before in that market. Advices from New York state that all the cheap bargains that were offered last week have been picked up and holders have since become reserved. A good many thousand barrels of cheap flour were purchased in New York last week, over and above what was required for consumption, which demonstrates a revival of the speculative feeling, and if this continues an improvement all round will not be long delayed."

FAVORITE LINE WITH FLOUR SHIPPERS.

The Canadian Pacific route via Charlton, N. B., to ports in Nova Scotia, has become a very favorite line with flour shippers. We quote from a letter written by Mr. J. P. Cox, a large commission merchant of Halifax, addressed to Mr. D. J. Seely, manager of the Seely Packet Line, running in connection with the Canadian Pacific Railway from Carleton for the Gulf ports:

"I have been greatly pleased with the way in which you have attended to this business (export flour) this season; such an improvement over the route via Boston, and owing to the quick despatch from Carleton and also quick transportation of cars from point of shipment to Carleton via Canadian Pacific that in future our customers will have confidence in ordering their goods via your route."

The flour shipments from Ontario to Nova Scotia were sent almost entirely via Boston until the new route was opened up. Opportunity is now given shippers to use a Canadian line which will deliver their flour in much better time and condition, and at as low rates as the Boston route. They also avoid Customs trouble and charges and storage and delay in Boston waiting for shipment. The principal Gulf ports for which the Canadian Pacific Ry. take flour, meal and other grain products, via the Carleton route are as follows:

Annapolis, N.S.	Hall's Harbor, N.S.
Barrington, N.S.	Kingsport, N.S.
Bear River, N.S.	Maitland, N.S.
Bridgetown, N.S.	Margaretville, N.S.
Canada Creek, N.S.	Meteghan, N.S.
Canning, N.S.	Noel, N.S.
Clementsport, N.S.	Old Barns, N.S.
Church Vaults, N.S.	Port Latour, N.S.
Cornwallis, N.S.	Port Williams, N.S.
Digby, N.S.	Parrsboro, N.S.
Economy, N.S.	Picket's Wharf, N.S.
French Cross, N.S.	Port George, N.S.
Five Islands, N.S.	Port Greville, N.S.
Granville, N.S.	Round Hill, N.S.
Great Village, N.S.	Shelburne, N.S.
Hantsport, N.S.	Spencer's Island, N.S.
Hillsboro, N.B.	Wolfville, N.S.
Harvey, Co. Albert, N. B.	Windsor, N. S.
Harborville, N.S.	Wesport, N.S.
Horton, N.S.	Weymouth, N.S.
Horton Landing, N.S.	Yarmouth, N.S.

If any Canadian miller is not already aware of the advantages of this route we would suggest to him communicating with the Canadian Pacific Railway officials.

THE FLOUR MARKET.

It will hardly be claimed that the year just closed has been very profitable to the millers of the country. Prices for some time have taken a turn that, in every day parlance, has left no money in the business. This condition of low prices has prevailed not only in the local markets, but, if anything, the export markets have been still more demoralized. Wheat started out at a low figure on the opening of the season, and it has been a case of dropping lower, with barely any interruption, ever since. During the past three months the highest price reached on the Chicago market was 74¾ cents, where 99 cents was the figure in 1891 and $1.03 in 1890. Besides, the weight of wheat was not equal to the average, thus affecting the product of the mill by lowering the yield of flour, and adding to the percentage of low grade.

In a recent number of the New York Commercial Bulletin it is remarked that "the prices of flour are now the lowest through the whole list on record. A comparison from the books of a large receiver of prices on December 1st of 1891 and 1892 shows the decline in one year as follows, on trade brands of spring wheat flours: Choice patents, then and now, $5.25 and $4.50; choice bakers' extras, $4.80 and $3.60; choice rye mixtures, $4.70 and $3,25; choice straights, $5.10 and $4.10; and choice winter straights, $4.90 and $3.80, all in barrels. But this does not show the entire decline from last crop prices. September 1st to October 1st, 1891, the price, on the same grades respectively, were $5.50, $5, $4.80, $5.25 and $5.10. These are not the extreme top prices on last crop, nor the extreme low ones on this. Low springs or export grades have suffered a still

greater shrinkage, not being wanted, whereas in 1891 they could not be had, and bakers' extras, in sacks, have sold for $2.75 and $3, against $4.75 to $5 previous crop, and even $5.10 to $5.25 on one or two occasions. Spring fine in sacks sold in 1891 as high as $3.75, and now sells at $1.60 to $1.70, and spring superfine and No. 2 do are unsalable at much more than fine for feedstuffs; No. 2 winters, then and now, $4 to $4.25 and $2 to $2.25; superfine do., 10 to 25c less, and No. 1 do., 25 to 50c more."

It is the way of human nature, despite many and continued set-backs, to look hopefully to the future. "There is a good time coming" is the refrain of the most disconsolate. Even though the past season has been one of low prices, as is pointed out elsewhere in an article in the MILLER, there is reason to believe that 1893 has already ushered in improved conditions; that bottom has really been struck, and prices and profits will mend shortly.

PRICES OF FLOUR AND MEALS.

Toronto: Manitoba patent, $4.35 to $4.40; strong bakers', $3.75 to $4; patents, $3.50 to $3.60; straight roller, $3 to $3.10. The Dominion Millers' Association Bulletin says of Ontario flour: "Straight grades, $3.10 to $3.15; patents, $3.10, $3.15, $3.25, $3.30; and 85%, $3.37; 80%, $3.60 per barrel, f.o.b. for Lower Province. Bran, $10 to $11 and $12; shorts, $13 per ton f.o.b. Sales reported for export at equal to $3.20 for 90% patent."

Montreal: Current prices are given as follows: Spring patent, $4.25 to $4.50; winter patent, $4.25 to $4.50; straight roller, $3,55 to $3.75; extra, $3.20 to $3.25; superfine, $2.65 to $2.90; city strong bakers', $4.10; Manitoba bakers', $4 to $4.10. A fair amount of business is reported in oatmeal, with prices thus: Granulated, brls., $4 to $4.05; rolled oats, brls., $4 to $4.05; standard brls., $3.90 to $3.95; granulated, in bags, $1.95 to $2; rolled oats in bags, $1.95 to $2; standard in bags, $1.90 to $1.95; split peas, brls., $3.50 to $4; pot barley, brls., $4 to $4.40; pearl barley, brls., No. 1, $7.25; pearl barley, brls., No. 2, $6.25; pearl barley, half brls., $6.75; pearl barley, pockets, 2X, 80c; rolled wheat, $2.65 to $2.75; buckwheat flour, $2; gold dust cornmeal, $4.50.

Manitoba: Prices at Winnipeg are quoted to the local trade in small lots 100 pounds: Patents, $1.95; strong bakers', $1.75; XXXX, 75c to 90c; superfine, 60c to 70c. Millstuffs, $8 to $9 per ton; shorts, $10 to $11 per ton. Rolled and granulated oatmeal, $1.80 to $1.90 per sack; cornmeal, $1.65 to $1.70 per hundred pounds; split peas, $2.60 to $2.65 per hundred pounds; beans, $1.75 to $1.90 per bushel; pot barley, $2.50 per 100 lbs.; pearl barley, $4.

SUITS MANITOBA.

THE Winnipeg Free Press says that the statement, that it is the intention of the C.P.R. to do away with North Bay as a distribution point for Manitoba wheat and substitute Fort William is looked upon with a good deal of favor by all the grain men in Winnipeg. There are no elevators at North Bay, and as the majority of country shippers bill to that point the result is an accumulation of grain, and the prices are affected to a considerable degree in consequence at the expense of the consignor and to the benefit of the ultimate purchaser. Added to this are the demurrage charges on cars not rebilled inside of 24 hours, which at the rate of $2 per day per car soon amounts to no mean figure. The change will alter these conditions. A sample case will very clearly illustrate the matter. A few days ago a city grain dealer shipped to North Bay a carload of rejected wheat which brought 54c. a bushel at that point. From Fort William to North Bay the transportation charges are 15c. per bushel, which would, if deducted from the price obtained at North Bay, put the grain at a valuation of 39c. at Fort William. This particular grade at Fort William was actually worth 50c. Thus a straight loss of 11c. a bushel is sustained in this case. On the higher grades of wheat, Nos. 1, 2 and 3 hard, the difference is not so great, being from 3c. to 5c., which, however, is a very considerable difference, and in the handling of several hundreds of thousands of bushels, leaves a wide margin.

Office of the CANADIAN MILLER,
January 16, 1893.

THE GENERAL SURVEY.

THE quietude of holiday times was disturbed, somewhat, by a sudden jump in May wheat on the Chicago 'Change, and a period of excitement not uncommon to the grain centre of the Windy City became the order of the day. There are those who accept the situation as an indication of improved prices; and in some respects a better tone has taken possession of the market.

Of a less disturbing character, doubtless, but perfectly satisfactory to many concerned, has been the advance in prices on the Manitoba markets. The increase was immediate and so one of these things that could, as it were, be taken hold of. Prices advanced from 3 to 5 cents, the Lake of the Woods Milling Co., one of the heaviest buyers in the Prairie Province, giving instructions to their agents to pay that much more to farmers.

Broadly, what the early months of the year will develop is what most concerns both buyers and sellers. This feature is to be recognized that the visible supply of wheat on this continent is no inconsiderable amount. But it is queried by some: Is the supply as heavy as the figures apparently indicate? It is to be remembered that the elevator accommodation of the country has been much enlarged during the year, and that where farmers held wheat themselves, formerly, their supplies to-day are in the elevators. So that if, in the calculation, we add to the supplies in the elevators an estimated supply in farmers' hands, we may be just that much out, and prices some day in the future will be affected accordingly. In an article elsewhere, entitled "Crop Reporting," we have referred to the large "find," as it may be termed, of wheat in the hands of three farmers in Minnesota, which gives rise to an intelligent inference that theirs is only a specimen case, which has its counterparts in large numbers in other states. In a word: Are we not usually out in our calculations of reserves in farmer's hands, because, taking the continent over, we are without an exact knowledge, to start with, of the complete yield, and as a result, we are never quite sure of the volume of reserve from time to time in the hands of farmers?

These are conditions that require consideration in any outlook we may take of the future. At the same time, this is to be said, that viewing the entire situation as it presents itself to-day, aside from any local move within Chicago or Manitoba, there is good reason to anticipate an improvement in prices, to some extent, at least, in the near future.

The final crop report of the United States government, issued Jan. 4, places the wheat crop slightly above an average in yield and in volume has only been exceeded in 1891, 1884 and 1882, though the crop of 1889 and 1880 nearly equalled it. The area as estimated is 38,554,430 acres; product 515,949,000 bu.; value $322,111,812. In the revision of acreage, the principal changes are made in some states in which the decline of the past 12 years has been heavier than has been reported. There has also been a considerable enlargement of breadth the past year in several western states. The rate of yield is 13.4 bu. per acre. The average value per bu. 62.4c. is the lowest average value ever reported, that of 1884 being 64.5c. and that of 1887 being 68.1. The average of the crop of 1891 was 83.9c. The weight of measured bu. will be determined later but it is probable that the acreage above will be equivalent to 500,000,000 commercial bushels.

Australian calculations are estimated by the London Miller in this way: Last season the total was over estimated by 6,700,000 bushels, it being assumed at about 38,005,000 bushels instead of 31,305,000 bushels. The New Zealand crop, which is not sufficiently forward at the end of November for estimates to be safe, was reckoned at 5,600,000 bushels, whereas it turned out to be 9,000,000 bushels. On the other hand the acreage in South Australia, assumed at the previous year's figures, was found to have declined 400,000 acres, and on the reduced acreage was more gravely deficient than at first supposed. Thus where 17,100,000 bushels have been originally expected, only 10,100,000 were eventually secured. The present promise is a great improvement on last year, as it had need to be.

	Acres.					Bushels.
Victoria.....	1,100,000	at	10	bush. per	acre =	11,000,000
N. S. Wales..	400,000	"	10	" "	" =	4,000,000
Queensland ..	40,000	"	9	" "	" =	360,000
S. Australia..	1,500,000	"	8	" "	" =	12,000,000
W. Australia..	40,000	"	8	" "	" =	320,000
New Zealand .	300,000	"	24	" "	" =	7,200,000
Tasmania	20,000	"	8	" "	" =	200,000
Total....	3,405,000					35,080,000

CURRENT PRICES OF BREADSTUFFS.

WHEAT.—Toronto: Winter, outside, 66c.; Midland spring, 63c.; goose, 58c. to 60c.; No. 2 hard offered 75c. f.o.c., Fort William, with buyers 69c.; 83c. was bid North Bay, and 86c. named for grinding in transit stuff: No. 3 hard, 75c. Chicago: A dispatch to John J. Dixon says: "Wheat weakened to 82½c. sold up to 83¼c., closing 81⅞c. for May. Room traders as a rule were bearish, and there was liberal realizing again by commission houses that have been long. The big bull interests, however, showed no signs of liquidating, but were liberal buyers during the early part of the session. The English visible showed a decrease of the amount on passage. Export clearances of wheat and flour aggregated 800,000 bushels. Receipts in the North-West were less than 200 cars, while receipts here were 278 cars, and 115 cars are estimated for to-morrow. There is nothing new to say of the market." January, 76⅜c.; May, 81⅞c. to 82c.; July, 80⅛c. St. Louis: January, 70½c.; May, 76½c. to 76⅝c.; July, 77⅜c. to 78½c. Milwaukee: Cash, 68¼c.; May, 73¾c. New York: March, 82⅝c. to 83⅛c.; May, 84¾c. to 85 9/16c.; June, 85¼c. to 86c.; July, 85⅞ to 86 11/16. British: The Mark Lane Express, in its weekly review of the British grain trade, says: English wheats are unchanged. Only 69,500 quarters have been sold. The average price was 4s. 8d. below that of No. 1 California, compared with a difference of 4s. 10d. in 1892, and 5s. 10d. in 1891. Hence, though prices are low, they are not excessively depressed, compared with those of foreign wheats. There has been a fall of 6d in foreign wheats in most of the markets, but trade is steady and values are still 6d. in advance of those prevailing at the end of 1892. Beerbohm says: Floating cargoes — Wheat, firmly held; cargoes on passage—wheat, firm, but inactive. No. 2 red winter, prompt steamer, 3d. higher, present and following month 3d. higher. Liverpool: Spot wheat, firmly held; No. 1 Cal., India, 1d. dearer; red winter, ½d. dearer, spring, ½d. dearer. On passage to United Kingdom—wheat, 27,000 qrs. To continent—wheat, 495 qrs. Imports to United Kingdom past week—wheat 189,000 qrs.; flour, 200,000 bbls.

BARLEY—Toronto: Quiet, yet firm and steady; No. 1 47c.; No. 2, 41c. outside; No. 3 extra, 35 to 36c. Buffalo: The market here is very quiet. No. 1 Canada, by sample, 79 to 81c.; choice bright, 83c.; No. 2 good, 75½ to 76c. One Buffalo despatch says: "Native grades are neglected and the general tone of the market is weak. The visible supply is discouraging; it exceeds last year's showing at the same date by 350,000 bush., with the excess principally located here and at Peoria and Detroit." Albany: The demand is limited and the market dull and unchanged. New York: Market dull; choice grades held firm. Stocks in store are very light; 64,000 bush. afloat; offerings mostly to arrive. Canada choice, 84 to 94c. Oswego: No movement; values nominally steady and unchanged. Milwaukee: The market is quiet, but at a slight advance for No. 1 January, which sold at 64½c. Sample lots on track, 45 to 62c.

PEAS—Toronto: A steady market with considerable demand. Purchases at 56c., but 57 to 58c. is asked.

OATS—Toronto: Sales at 31c.; mixed and white, 28c. Chicago: January, 31¼c.; February, 32½c.; May, 35½c. Buffalo: No. 2, 41c. on track, 42c. in store; No. 3, 40c. on track, 41c. in store; No. 2, mixed, 38c. on track. Oswego: Dull; extra No. 1 white, 40c.

RYE—Toronto: Very little offering; firm at 59 to 61c. outside. Buffalo: No. 2, 63c.

BUCKWHEAT—Toronto: Firm at 42 to 43c. outside.

MILLING FLOUR & GRAIN

CANADA.

—H. N. Schmidt, grist mill, Mildmay, Ont., has called a meeting of his creditors.

—The prospects are hopeful for the establishing of a new flour mill at Prince Albert, Man.

—Four car loads of machinery for the new flour mill at Whitewood, Man., have reached that point.

—John Mackay, miller, Bowmanville, Ont., writes: Trade very good in my line; orders ahead to April.

—D. McIntosh and Gillies Bros., of Whitewood, Man., are shipping considerable wheat direct to Toronto.

—Large quantities of grain are being received by the Brackman & Kerr Milling Co., New Westminster, B.C.

—The Lake of the Woods Milling Co., distributed one hundred and fifty turkeys among their employees at Christmas.

—McLaren & Co's. barns, Buckingham, Que,. caught fire through the explosion of a coal oil lantern and caused a loss of about $5,000.

—A new stone and flouring mill is to be erected at Exeter, Ont., by Messrs. A. J. Rollins and J. A. Williams. Both parties are competent men.

—For the five weeks ending Dec. 31, there were 1,778 cars of wheat inspected at Winnipeg, as compared with 2,761 cars for the corresponding time in the previous year.

—The new steam grist mill at Harrietsville, Ont., owned by Halton & Jenkins, has been destroyed by fire. Two hundred bushels of wheat and some flour were in the mill and were destroyed.

—A fire at Caledonia, Ont., destroyed the premises of the Caledonia Milling Co., which suffers a loss of $2,000; partly insured. Hall & Old, grain merchants, were also losers to the extent of $1,000.

—Joseph Woodruff, of Killarney, Man., has sold out his grist mill to Young Bros. and Thos. Buck. Buck is a practical miller and had been employed in the Boissevain flour mill and came from Ontario.

—R. Muir & Co. have moved their mill from Shoal Lake to Gladstone, Man., where it has been fitted up with improved machinery, and a much better mill building has been erected. The mill will have a capacity of 125 barrels.

—Certain members of the Winnipeg Grain Exchange, who have studied the matter carefully, estimate that there is at present between 4,000,000 and 5,000,000 bushels of good wheat in Manitoba and the Northwest yet unmarketed.

—The imports from Canada at the customs house at the port of Suspension Bridge, N.Y., one of the most important entry ports in this country, for the past year show a total of $361,210. This is a falling off of over $50,000 from last year's total, due principally to the falling off in the imports of barley.

—Stocks of Manitoba wheat in store at Lake Superior and interior points approximate about 5,000,000 bush. The tendency since the close of navigation has been to accumulate slowly but steadily. Marketing in the last few weeks has been very light, and the crop appears to be pretty well out of first hands. About 2,000,000 bush. is probably the limit remaining to come out.

—It has become known that L. P. Druneau, senior partner of Druneau, Curry & Co., flour dealers, Montreal, Que., whose death occurred the early part of January, committed suicide. While conversing with a friend he appears to have become suddenly insane, the result, no doubt, of long sickness, and before his intentions were realized he drew a revolver from his pocket and placing it to his temple, fired with fatal effect.

—A rather serious accident happened in the mill at Austin, Man., recently. Mr. McKinnon, one of the millers working on the night shaft, while putting on a belt which drives one of the purifiers, became entangled in a pair of gear wheels. All his clothing was stripped off, bruising him considerably and breaking two or three ribs. Fortunately for him, the wheel slipped and let him drop on the floor below, where he was found a short time afterwards.

GENERAL.

—St. Louis has a grain blockade just now.

—The Mexican tariff on corn will become effective Feb. 1.

—There are over three hundred and sixty varieties of wheat in the world.

—Corn as a breadstuff is coming more and more in favor in the various countries of Europe.

—The wheat harvest of South Australia promises to be excellent both in yield and quality.

—The output of flour by the Minnesota mills for the first week in the new year was the lightest in ten years.

—The North Dakota Milling Association, with headquarters at Grand Forks, N.D., intends to put in cooper shops at certain points for supplying its different mills with barrels.

—Archibald's flour mill at Dundas, Minn., the largest in the state outside of Minneapolis, was burned on New Year's night, and also the elevator adjoining it. Loss $100,000; insured.

—A manufactory on a large scale is reported to have been established at Port Limo, Costa Rica, for the purpose of manufacturing flour out of bananas, which is said to be found more nutritious than rice, beans or corn.

—The United States senate on Jan. 5 passed an amendment to the interstate commerce law which provides that no person shall be excused from testifying on the ground that his testimony might tend to incriminate himself.

—This year's English wheat, says Beerbohm, does not improve in quality, and the price obtainable for it (25s. to 29s.) is so low that farmers are using an unusually large percentage of it for cattle feeding, although in the opinion of practical cattle breeders there is a limit in this direction beyond which it is unwise to go, no matter how cheap wheat is; the chief breadstuff, in fact, is considered by many practical men as the reverse of a good cattle food.

PERSONAL.

Mr. W. W. Ogilvie, the big miller, has been elected president of the Montreal Board of Trade.

Mr. J. L. Spink, the well known miller, has been elected treasurer of the Toronto Board of Trade. He is just the man for the position.

Mr. Wm. Hastings, manager of the Montreal house of the Lake of the Woods Milling Company, has been visiting in Winnipeg, Man.

Mr. S. A. Milligan, head miller for Copeland & Sons, Penetanguishene, Ont., has been made general manager of the firm's business at Midland, Ont.

Mr. M. McLaughlin, President of the Dominion Millers' Association, is up for election to the council of the Toronto Board of Trade. He ought to get there.

Mr. T. M. Clark, superintendent of the Ogilvie flour mills, Montreal, has been presented with a handsome gold watch by the employees of the "Royal" and a massive chain and locket by those of the "Glenora." Each was suitably engraved.

Mr. Robt. T. Walker, the oldest grain buyer in the county of Bruce, who is carrying on business to-day, has been presented by the farmers of Huron township with a valuable gold watch and Mrs. Walker with a chaste gold brooch. Mr. Walker has been on the market for about thirty years.

We had hoped to have been able to congratulate Mr. John Brown, of the Citizens' Milling Company, on being elected an alderman for the city of Toronto. The papers elected him by their figures on the morning after the election, but the official count left him out by a few votes. He would have made the kind of alderman Toronto wants this year. The splendid run made presages victory another year.

TRANSPORTATION TOPICS.

All along the line of the C. P. R. in the west, the C. P. R. have intimated to the grain men that the privileges extended to the proprietors of elevators in regard to the shipping of barley and oats have been withdrawn, and in future these grains may be shipped direct on board the cars.

A Duluth paper gives currency to the rumor, and with, it is thought, some apparent degree of foundation, that the Canadian Pacific is about to gobble up the Duluth & Winnipeg railway just as President Hill is forecasting with evident relish the consummation of his scheme to absorb the road.

Mr. John Earles, western freight agent of the Grand Trunk, has informed the grain section of the Toronto board of trade that in order to prevent blockade of grain on the Canadian side in consequence of the inspection imposed upon Canada by the American roads, it will sometimes be necessary to employ an extra United States customs officer on the American side, and that in such cases a record of all expenses for said inspection on the American side will be kept, and shippers or owners of grain so inspected will be required to pay the cost of the extra United States officer pro rata per car, having regard to the number of cars inspected for each shipper.

NEW PUBLICATIONS.

The value and utility of that unique literary publication, The Weekly Bulletin of Newspaper and Periodical Literature, published in Boston, are to be greatly enhanced by the immediate addition of some important new features. Besides serving as a guide and index to the press of the country by affording a weekly classified and descriptive catalogue of the contents of over twelve hundred different papers and magazines, the bulletin will hereafter supply the growing public demand for a review of the periodical press by devoting several pages every week to comprehensive summaries of the best and most interesting articles appearing in the monthly magazines and the daily and weekly papers.

The Review of Reviews, founded and edited, so far as the English edition is concerned, by Mr. W. T. Stead, grows rapidly in popularity and influence. The American edition, edited by Dr. Albert Shaw, and which reaches the LUMBERMAN every month, is brim full of bright and suggestive thoughts. It has, most aptly, been called the "busy man's magazine," and we know of no journal that so perfectly, and with such marked journalistic ability, faithfully and completely mirrors the best thought the world over every month. The man who reads carefully the Review of Reviews the year round will have just claim to the title of a well-read man.

KIND WORDS FOR "THE CANADIAN MILLER."

THE newspaper press of city and country, along with many of our subscribers, have taken occasion to say some kind things of the Christmas number of the CANADIAN MILLER, which reached them last month. We make a few brief excerpts, all our space will permit:

Globe: Among the many excellent Christmas numbers of Canadian publications few, if any, can compare with that of the CANADIAN MILLER.

Mail: The editor is to be congratulated on turning out a really good number.

Empire: A particularly handsome number. The reading matter is of a very high literary character appropriate to the season and the constituents of this journal.

World: Reflects credit upon the managers of this enterprising journal.

Hardware: A very prosperous looking production, and the attractiveness of its appearance is fully equalled by its merits.

Witness, Montreal: The cover is striking; the reading matter is of an exceptionally interesting character.

Milling World, Buffalo: An extra-fine number. The contents are full of the spirit of the season. We compliment our neighbor on its taste and enterprise.

The Journalist, New York: A model of neat typography and literary taste.

News, Truro, N. S.: An artistic publication. Should be in the hands of all in whose interests it is published.

Sentinel, Pilot Mound, Man.: Finely printed, every article is clear, vigorous and interesting.

Examiner, Charlottetown, P.E.I.: One of the best things of its kind.

Patriot, Charlottetown, P.E.I.: An excellent and useful journal.

Summerside Journal, Summerside, P.E.I.: Typographically and otherwise leaves nothing to be desired. Replete with information useful to the trade.

Sentinel, Woodstock, N. B.: A fine number.

TRADE NOTES.

Mr. Alonzo W. Spooner, known the country over for his Copperine specialty, has been admitted a partner of the Queen City Oil Co., Toronto, and will be an active member of that firm. His Copperine business at Port Hope runs along just the same, with Mr. Samuel Bennett as manager.

We are in receipt, from Robin & Sadler, of Montreal and Toronto, of a novelty in the way of a price list, printed in gold on an ivory tablet, with one side blank to be used as an erasing tablet. Not only is the idea novel, but very tasty and useful. In a letter to the MILLER this firm reports the results of last year's business to have been very satisfactory and present indications promise well for '93. They add: "This speaks well for the manufacturers in general of Canada who seem to have plenty to do and are consequently buying considerable belting to run their new machines."

A HOME INSURANCE COMPANY.

No argument is needed in the present day to justify life insurance. The question is largely one of methods and where to insure. A company that holds a first place among the insurance companies of Canada is the Ontario Mutual Life, with head office at Waterloo. The new business of the year 1892 was $2,676,250, and there was more cash in it than in the business of any previous year. A pleasing feature of the business, the superintendent of the company says, in a recent communication, is the continuous low ratio of mortality, a convincing proof of the care exercised in the selection of risks. The insurance in force by this company to date is $16,000,000. The interest income exceeds death losses by many thousands. Surplus is about $200,000.

A NEW GRAIN-CLEANER.

The following brief description is given of a "washing, stoning and drying" machine for wheat, recently brought out in Darmstadt, Germany: The wheat enters together with a strong current of water two horizontal copper cylinders, which revolve slowly. Through the pressure of the water the wheat is moved forward, while the stones by their weight sink to the bottom of the cylinders, whence they are slowly brought back again towards the head end by a special mechanism and dropped out of the machine. The water and wheat go over the tail end of the cylinders and drop into a trough below. The good berries leave this trough by an opening in the lower part, while the lighter grain and other substances float on the surface of the water and are led away by a special spout at the side of the machine. The good wheat goes through the spout into the lower part of the drying apparatus, which consists of two cylinders covered with perforated sheet-iron. A system of strong, round beaters revolve in the interior of these cylinders at a speed of 400 revolutions per minute. These beaters throw the wheat against the perforated covering and carry it towards the tail end, where it leaves the lower cylinder and is carried into the upper cylinder. After having been subjected in this second cylinder to the same treatment, the wheat leaves the machine in a dry condition. On both ends of the drying cylinder are mounted strong fans, which draw the air into the cylinder from both sides. By this arrangement the air is forced to seek its way out through the perforations of the coverings. It thus keeps the holes open and dries the wheat, from which the water is thrown by the rapid movement. No steam or hot air is required for drying the grain. Many of these machines are now in use in Europe. Their capacity ranges from 6 to 20 sacks per hour.

KEEP YOUR EYE OPEN.

Scientific bolting by modern self-attending reels is all right, but it must not by any means be the sole dependence for constant, perfect work, for the way in which grinding is done is half of the battle. Stuff well ground is half separated. It is no trouble to separate properly ground material. It is no trouble to purify properly made middlings. It is no trouble to finish the bran from properly treated break stock. In other words, no matter what sort of machinery you have for separating—for milling is separating—it will not atone for neglect of the miller.

ALIGNMENT OF SHAFTING.

Where a shaft is crowded with pulleys and of different diameters, I have found, writes a correspondent of Power, that I can get good results in the following manner: Drop a plumb line from near each end of the section of shafting carrying the main driven pulley (supposing this pulley to be in direct position as regards the driver). Use light lines and heavy bobs. Do not tie the lines to the shaft, but make a long loop, and allow the bob to reach nearly to the floor. Stretch a light line entirely through the building, or far enough to correspond to the shafting overhead, and high enough from the floor to clear the machinery or other obstructions. True this line by the two plumb lines and secure it at both ends; then drop a line at the next bearing, secured in the same manner as the first two, and adjust that box until the plumb line will rest against either side of the lower line. Repeat this at each bearing, but do not use too many lines at once, as they would all need watching. After the lower line is secured in place, one plumb line is sufficient. If the shaft is clean and smooth under the loop at the end of the plumb line, the bobs will find the center regardless of the different diameters of shafting.

FLOUR-MOTHS IN CALIFORNIA.

Recently a San Francisco paper has been investigating the subject of the presence in the flour-mills of that city and California of the Mediterranean flour-moth, and it declares it has already become an alarming pest, resulting in the loss of thousands of dollars to a number of large establishments, and that it will result in still greater loss before very long. The statements are based mainly upon interviews with W. G. Johnson, professor of entomology in the Leland Standford University, and with a number of flour manufacturers. They say that there is hardly a mill in the State which is not affected by the moth, and that all efforts to eradicate it have been unsuccessful. The moth is continually spinning strands of silk in great quantities, which not only get into the flour, but also clog the machinery so badly that the mills are obliged to shut down temporarily. Prof. Johnson, who has made a careful study of the subject, says he has discovered that the moth propogates more rapidly in this climate than in Canada, the Eastern States or other colder countries where it appeared. He predicts that the disastrous effects of this moth will be very apparent in nearly all the mills of the State before the end of another year.

FIRST WHEAT IN AUSTRALIA.

The man who first grew wheat in Australasia was James Ruse, a convict transported for burglary. He is mentioned in the Sydney Gazette of June 20th, 1827, as being the first man to land, having carried Colonel Johnson ashore on his back from the boat. When he obtained his liberty he was granted a piece of land to grow wheat, and he was the first to grow that grain in Australia. His grave in the Campbelltown cemetery, N.S.W., has an historic interest, and the epitaph on the stone which marks his humble resting-place runs as follows:

I H S
Gloria in Axcelsis.
Secred
To the MEMeREY of James Ruse who departed this life Sept 5 in the year of Houre Lord 1837 natef of Cornwell and arived in this Coleney by the forst fleet aged seventy-seven.

My mother reread me TENDERLEY,
With me she tock much paines;
And when I arrived in this Coleney,
I sowed the forst grain;
And now with my HEVENLY Father
I hope forever to remain.

Mr. Zetterlund, acting on behalf of a number of people in Sweden, is visiting different districts of Manitoba and the Territories, hunting for suitable locations for a settlement. As soon as he reports to them, it is likely there will be a large party come out.

WANTED AND FOR SALE

FOR SALE OR TO RENT—THE FOUR-storey stone Grist Mill (known as Dean's mill) and dwelling-house, sheds and blacksmith shop adjoining, situated on lot 5, con. 8, Clinton township, Lincoln county. Terms moderate. Address Andrew Spiece, or Jacob Michener, Campden P.O.

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"I have, however, much pleasure in drawing your attention to the fact that the commission income alone, as you will see by referring to the Revenue Account, **exceeded the total claims for fire losses, a record, I believe, unprecedented in the history of any other fire insurance company either here or in the mother country.**
The assurers with this Company, since it was established in 1885, have already saved on the current exacted rates, upwards of **forty-five thousand dollars.**
As no canvassers are employed, dealing directly with the assured, those desiring to avail themselves of the advantages offered by this Company will please address:

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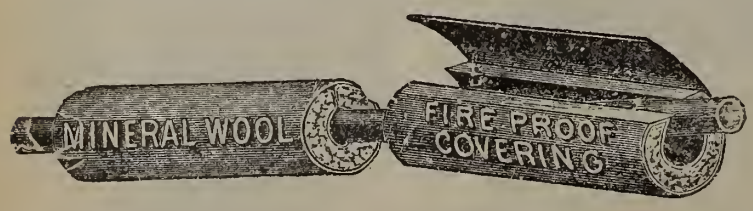

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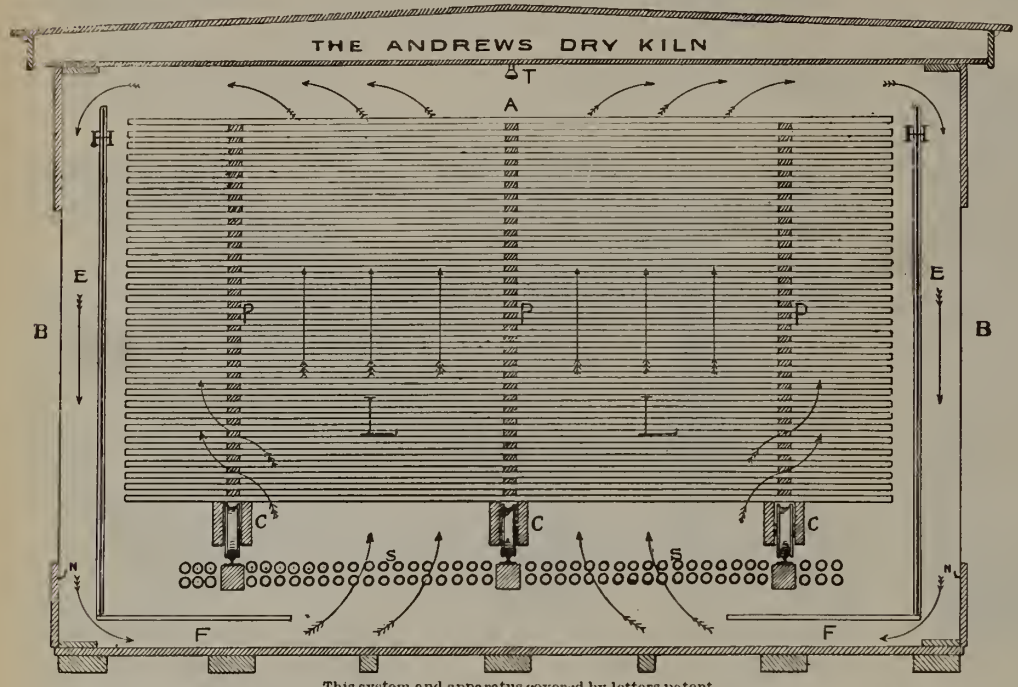

This system and apparatus covered by letters patent.

A—Drying-Room. BB—Brass Condensing-Walls. CCC—Lumber Cars. EE—Down Air-Flues. FF—Bottom Air-Flue. HH—Inside Walls, protecting metal from heat. LL—Lumber on cars. NN—Brass Gutters for receiving condensed moisture. PPP—Sticks between lumber. SS—Double Steam-Coils. T—Automatic Steam Fire-Extinguishers. Arrows show direction of currents of air.

THIS DRYER

HAS PROVED TO PURCHASERS TO DO WHAT IS GUARANTEED IN SAVING THEM MONEY IN

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There may be persons who do not appreciate the advantages of the artificial drying of lumber. But the shrewd men, in the manfacture of furniture and other woodwork where reputation would be sacrificed by a lack of proper material for good gluing and finishing, recognize a good system of drying as an important element of their success. High scientific authorities and thoroughly practical men are now agreed that the hot-blast and rapid-current systems ARE WASTEFUL, and that steam heat is the only safe means for artificial drying. The mode of applying steam heat most efficiently and economically is therefore now the essential point. The Andrews Dryer accomplishes this result more surely than any other known system.

NO FAN NO ENGINE
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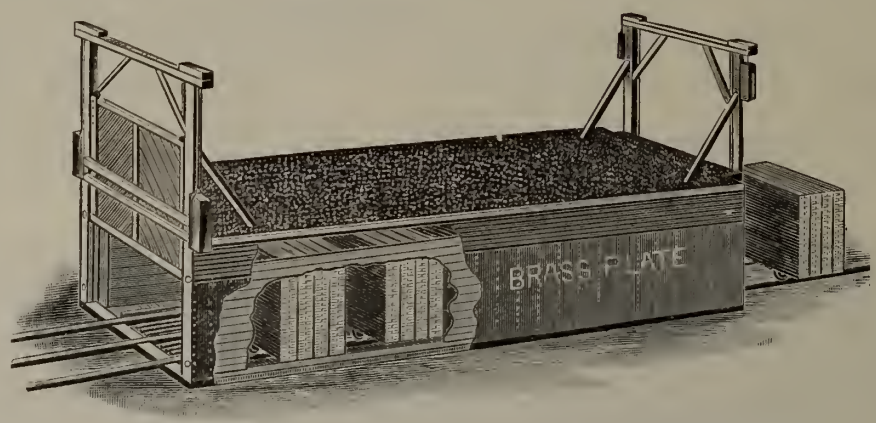

Outside View of the Andrews Progressive Kiln, showing Lumber placed crosswise the building, on cars.

"WE PUT GREEN SPRUCE IN DRIPPING WITH WATER, AND IN EIGHTEEN HOURS IT WAS DRYER THAN LUMBER THAT HAD BEEN STUCK UP IN THE YARD ALL SUMMER."

This is the verdict of a Quebec lumber firm, and we can give equal results every time.

The Andrews Lumber Dryer

Has been proved to possess the following points of excellence:

1st. That its drying is rapid and perfect.

2nd. That external and internal checking and discoloration are entirely avoided by this method.

3rd. That the drying is done by a CONTINUOUS system and the temperature of the kiln is under absolute control at all times.

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5th. That our drying is done by the slow continuous movement of a large body of slightly-moistened air.

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7th. That our piping is tested by high pressure and every outfit is fully guaranteed.

8th. That by our improved system of drainage the freezing of pipes becomes impossible.

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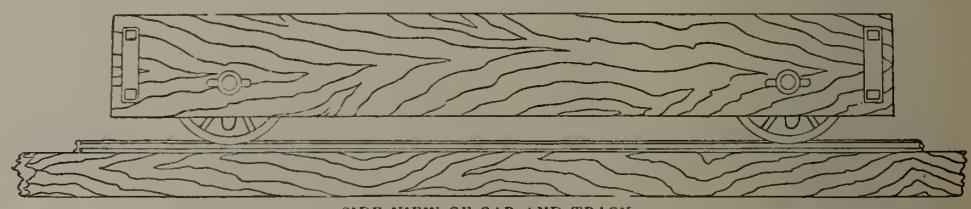
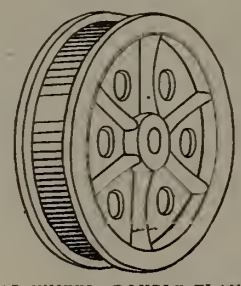
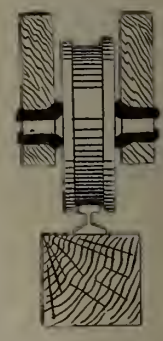


SIDE VIEW OF CAR AND TRACK.

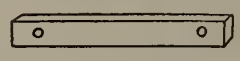
DOUBLE FLANGE WHEEL ON SINGLE TRACK



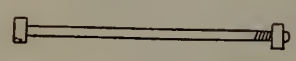
CAR WHEEL, DOUBLE FLANGE



SECTION OF CAR TRUCK, SHOWING AXLE BOX.



STRAP WASHER



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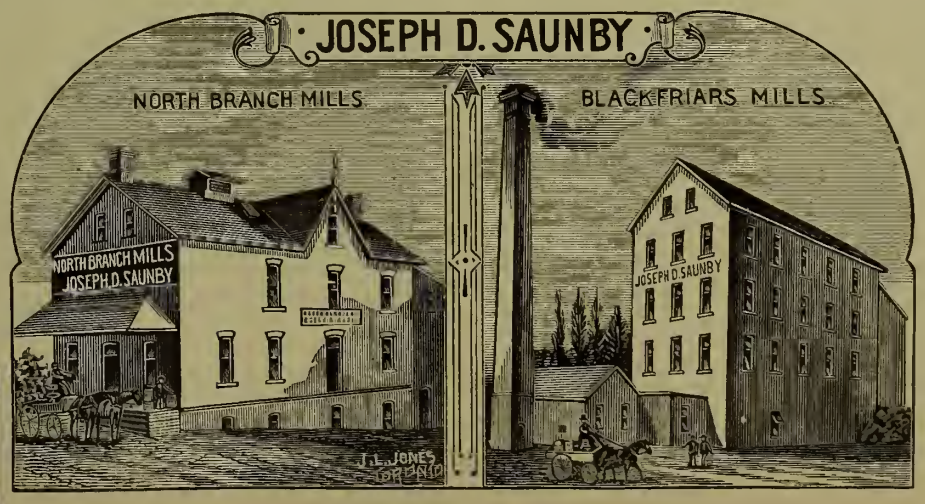

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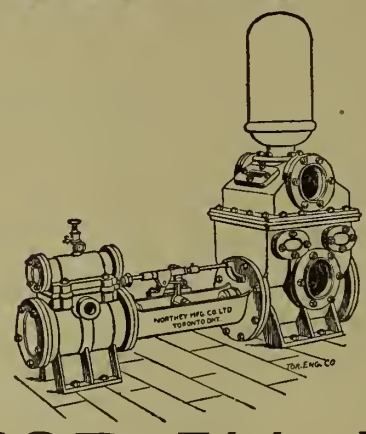

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OLD SERIES, VOL. XI. NEW SERIES, VOL. III. } NUMBER 2. TORONTO, ONT., FEBRUARY, 1893 { TERMS, $1.00 PER YEAR SINGLE COPIES, 10 CENTS

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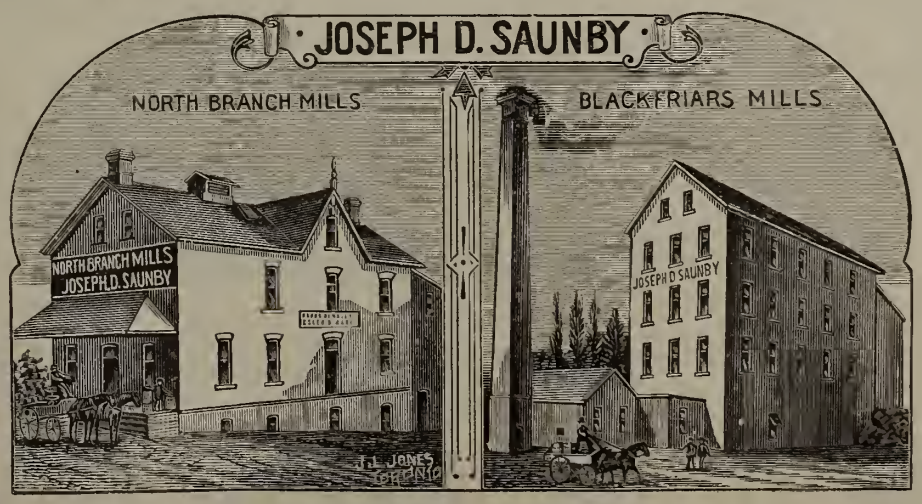

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THE CANADIAN MILLER

Old Series, Vol. XI. } Number 2.
New Series, Vol. III. }

TORONTO, ONT., FEBRUARY, 1893

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BY THE WAY.

MUCH as some folks will take their bit of fun out of the descendants of Scott and Burns because of their firm reliance in the nutritious effects of oatmeal bannocks and porridge, oatmeal has long since come to stay. A large-sized regiment, altogether outside of the Sons of Scotland, relish their dish of oatmeal. Even in competition with the various cereal dishes of a fancy character that modern ingenuity has made so popular, oatmeal holds well its place. It is noticeable that Canadian millers are paying increased attention to the production of oatmeal, and these and others will read with interest an article in this month's CANADIAN MILLER on "Oats as a Food Producer," taken from the columns of the London, Eng., Miller.

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A movement has been made by Mr. Nicholas Flood Davin, M. P., for West Assiniboia, to abolish the privilege of grinding wheat in bond, which was secured to millers in 1880. Mr. Davin, in introducing his bill, affected that he was working in the interests of the farmers of the Northwest, and made the statement that this privilege was granted Ontario millers for the purpose of securing to their mills the necessary supply of wheat to keep them in full operation. From Mr. Davin's standpoint the inference is that this objection no longer exists, for before the millers of the country lay stretched the rich wheat fields of the Northwest from which eastern millers can draw in abundance at their pleasure. The argument is plausible, but in making a point of interest to his constituents Mr. Davin got away from the real purpose of the measure. Grinding in bond gives the miller a favorable position alongside of the American miller in competition for export trade and in this is the strength of the measure. It is a privilege that has been very little used for some time past, yet it is a safeguard that it is desirable to retain in case occasion should call it into exercise. The ground was thoroughly traversed at the time the measure was first introduced into legislation and there is no good reason that has been brought into existence since then, to call for its abolition. Millers, however, will show good generalship in making the matter thoroughly understood by their representatives in the House of Commons from the various constituencies of the Province.

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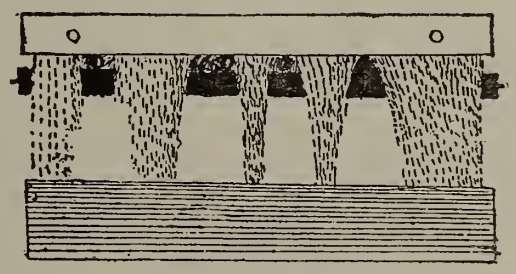
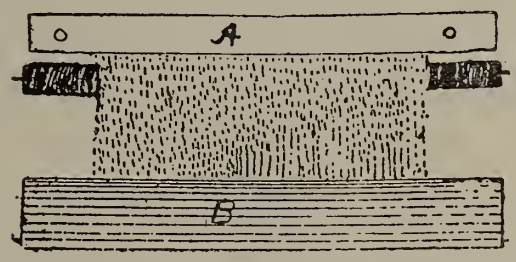
The resolution passed at the annual meeting of the Dominion Millers' Association in August last declaring that it takes four bushels and forty pounds of wheat to make a barrel of flour has been quite largely copied and commented upon by milling and other journals. Though six months have passed since it first appeared in print it is still a live item, one of the latest references to it coming from an American journal, the Inland Ocean, a few weeks since. The concensus of opinion has been favorable to the opinion expressed in the resolution. The Inland Ocean, after having remarked that the question is one that has long vexed the minds of a great army of millers in the United States makes this comment: "It seems like a very summary way of settling such a problem, but it is better settled that way than not settled at all. And after all there is both method and logic in it. The quantity named is of course to be taken as an average and a basis upon which millers may conduct their business and reckon profit and loss. It is certainly much better than having an official or standard basis. If prices of flour are made and maintained on that basis the miller can tell with a reasonable certainty what he is doing all the time, instead of going it blind on a basis varying all the way from four bushels and ten pounds to four bushels and forty pounds to the barrel, as is reckoned in the United States. Most of the estimates here are entirely too low, which leads many millers into errors and undoubted loss. The Canadian plan is much the best. Whether exactly correct or not it is at least a standard." It may be worth while repeating here, what was said by Mr. J. L. Spink, in introducing the subject at the convention, that the calculation is not one of guess work, but was fixed by Mr. Spink, after a careful accounting of details in the work of his own mill.

A LESSON ON FEEDS IN FEW WORDS.

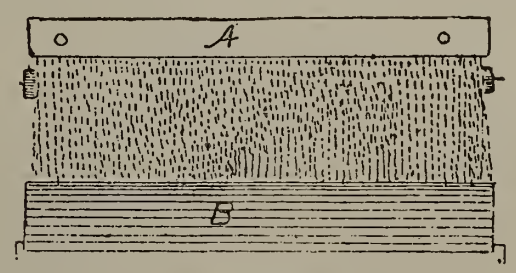
WHETHER you are a practical miller or not, you know a thing when you see it; and when you lift the shutters to a roller mill, in your mill, and find the feed going to the grinding rolls in bunches and jumps, in strong and weak currents, or in runs of thread streams of unequal density, thus:



or only feeding at the middle, like this:



and never in a sheet of equal density spread the full length of the rolls, you can bet your bottom dollar that it will pay you to buy an automatic feeder that will feed your rolls according to the following sketch, see?



CONDITIONS IN RUSSIA.

SAYS a recent letter from Odessa, Russia: "As the winter advances the sufferings from want and disease are becoming indescribable in the famine-stricken districts. One of the foreign consuls here, who has been visiting these districts, says that the poor starving people are dying off like flies at the end of summer. In addition to other places the provinces where hunger and disease are killing the peasantry are Kieff, Bessarabia, Kharkoff, Koursk, Riazan, Orel, Tula and Voronesh, and how these poor creatures are to survive the winter is a problem which the government is trying to solve. Rarely has the commercial outlook been so dismal in South Russia as at the present time, and the number of large business houses verging on the brink of bankruptcy is causing the government great uneasiness."

"Light and air in the engine and boiler rooms pay well," says an exchange. Surely, say we, and in every department of the mill.

THE DISCOVERER OF STEAM POWER.

INVENTION, a journal devoted, as the title would indicate, to the subject of inventions and inventors, tells the pathetic story of Solomon Caus, a Normandy scholar, who lived in 1576 and thereafter, and wrote many scientific works, all of which led up to his conception of an idea which resulted in the transformation of his whole life into a tragedy. After pestering the king and the cardinal of Paris, he was ordered to be taken to Bicetre—the mad house, and there shut up. This was done. They had just one way with mad people in those days. They shut them in iron cages and fed them through the bars like wild beasts. They did this to Solomon Caus. For a long time he stood behind those bars all day and called to those who would listen, and to them repeated the story he had told the cardinal. He became the jest of the place. Some of them gave him writing materials, and then, amid the misery of his surrounding, he wrote down his ideals and amused his jailers so much the more. However, it could not be long before such a life, such surroundings, would shatter any brain. In time Solomon Caus was as mad as every one believed him.

It was in 1624 that an English nobleman, Lord Worcester, went to Paris and visited Bicetre. As he was passing through the great court, accompanied by the keeper, a hideous face with matted beard and hair, appeared at the grating, and a voice shrieked wildly, "Stop! stop! I am not mad, I am shut up here most unjustly. I have made an invention which would enrich a country that adopted it." "What does he speak of?" the marquis asked his guide. "Oh, that is his madness," said the man laughing. "That is a man called Solomon Caus. He is from Normandy; he believes that by the use of the steam of boiling water he can make ships go over the ocean and carriages travel by land; in fact, do all sorts of wonderful things. He has even written a book about it which I can show you." Lord Worcester asked for the book, glanced over it and desired to be conducted to the writer. When he returned he had been weeping. "The poor man is certainly mad now," he said, "but when you imprisoned him here he was the greatest genius of the age. He has certainly made a very great discovery." After this Lord Worcester made many efforts to procure the liberation of the man, who, doubtless, would have been restored to reason by freedom and ordinary surrounding, but in vain; the cardinal was against him, and his English friends began to fancy that he himself had lost his senses, for one wrote to another, "My lord is remarkable for never being satisfied with any explanations which are given him, but always wanting to know for himself, although he seemed to pierce to the very centre of a speaker's thoughts with his big blue eyes that never leave theirs. At a visit to Bicetre he thought he had discovered a genius in a madman, who declares he would travel the world over with a kettle of boiling water. He desired to carry him away to London that he might listen to his extravagancies from morning till night, and would, I think, if the maniac had not been actually raving and chained to the wall."

Thus, in Bicetre died the man to whom, after his works were published, many people gave the credit of being the discoverer of steam power, and it is said that from the manuscript written in his prison, Lord Worcester gathered the idea of a machine spoken of as a "water commanding engine," which he afterward invented.

Historians have denied that Caus died in prison, but there exists a letter written by Marion de Lorme, who was with Lord Worcester at the time of his interview with Caus, which establishes the fact beyond doubt.

SOME MORE MILLERS STILL.

A FOOL of a miller in Cambridge
Got his head knocked off by a blambridge,
And his widow all gay
Brought suit and got pay
From the company that owned that sambridge.

A handsome young miller in Cirencester
Met a maid by his mill-door and kirencester,
And he staid by that door,
Waiting to do so some moor,
But it always so happened he mirencester.

There was an old miller in Worcester,
A regular rock-headed old rorcester,
Who'd ne'er spend a cent
Till his old mill flat went,
And hard was the lot he was redorcester.

A miller got "stuck" on a system
Which was "chock-full of ducats." He mystem,
To his infinite surprise,
And there were tears in his ise
When the sheriff came in to assystem.

ON REELS.

By W. T. Bates.

AMONGST the various machines used in milling, none, perhaps, has been the object of so many minor improvements, and yet retained its form and position so effectually, as the reel. We have no difficulty in finding a reason for this, as it is, without doubt, the simplest of all our machines, and the one which gives the least trouble in working. As a slow-speeded machine it meets our ideal; for high speeds mean not only more power, but greater wear and tear. A feature, and a mistake, too, in the older construction, was their cumbersomeness; but, then, all classes of machines, including centrifugals, were made too heavy at first. By experience we have learned that two 2-sheet machines are infinitely better than one 5 or 6-sheet machine, and the same remark applies in degree to centrifugals. In long machines, as in the long "face" of the millstones, a portion is finished on the first third, or the first half, but must continue to tumble and turn over the remainder before it can get out, in which process it does infinite harm. We have now come to a more sensible length, namely, 2 or 2½ sheets, with good results.

Many devices have been tried for increasing the efficiency of the reel, some of them being what we should now term barbarous. The first reels erected—at least by one firm—had radial rods to each rail, on which hardwood balls slid, causing a rapping and jarring to keep the silk clean. Many other forms of wrappers or knockers were used, but none were so effective as a piece of light sacking as a sweeper, or wiper, since generally used. In some cases lifting boards carried the material bodily to the top, and dropped it in a body to the bottom, which would be thought a somewhat rough method in the present day. In another case the rail was slotted, or perforated, so as to allow a portion to slide through, with the object of gaining an exactly opposite effect to the foregoing. This was an improvement. Another undoubted improvement was the use of flat iron rails instead of the rather thick wooden ones previously used. In this case nothing was lifted above the centre, so that the action was very gentle, but the efficiency or capacity was somewhat reduced. A further innovation was the introduction of round reels, but although the product therefrom was satisfactory, the efficiency was too much crippled, so that a round reel, pure and simple, was not a success. Not, however, that the principle is wrong; the reason being that the load lay too much in a body, on too small a portion of the silk, to dress at all freely. Indeed, all classes of reels were open to the fault of dressing only on one side, and that where the load was thickest. In the modern reel this defect is overcome, for by means of various devices which distribute the feed on both sides, the efficiency is greatly increased without the barbarous extremes of twenty years ago.

Years ago I discovered that lifters were right in principle, although wrong in arrangement, and that by making them of the right shape a portion of the feed could be carried over the centre and deposited on the descending side of the reel with vastly improved results. Indeed a reel can be made to work almost, if not quite, equal to a centrifugal. Anyone can apply these to their reels; the only thing is to have the inclination sufficiently acute to prevent the material falling off too soon, and at too great a distance, so as to cause harshness. A variation of this idea, and doubtless an improvement, is found in several machines of recent introduction. Various devices are adopted for distributing the feed on both sides of the machine, with, I doubt not, satisfactory results; for the possibilities of the reel are unquestionable, and all millers should feel thankful for the increased efficiency and perfection which will warrant and ensure its retention in our mills. We may invent new machines, but I doubt if we shall find a more useful and simple servant than our old, well-tried friend, the reel, as now constructed. For certain classes of work the centrifugal is quite unsuitable, although in its place it is a good machine. The reel, however, has the advantage of adapting itself to all classes of work in a satisfactory manner. I should certainly give the preference to reels which are round, provided they are made effective by internal arrangement. Of course the greatest efficiency is gained in a machine where the feed is discharged in a direct line with the holes in the silk. A reel can never do this, and hence can hardly attain a like efficiency; but some of this difference is undoubtedly made up by the use of a coarser silk, which, when the feed meets it obliquely, as in the reel, produces almost the same effect as the finer silk in the direct-acting machine. The mesh of a No. 8 silk at an angle of 45 to 60 degrees gives a result equal to a No 18 or 12 when the action is direct; the only difference is decreased efficiency. I incline to the idea that flour dressing could be accomplished by direct action, either vertically or horizontally, with a very small surface of silk, and I shall not be surprised to see invention start off in this direction.

SIMPLE BELT LACE.

In lacing a belt, says an experienced machine man, the lacing should never be crossed on either side. To lace a belt in the manner illustrated herewith make one more hole in one end than in the other so there will be

a hole in the middle of one end, which is the place of beginning. Draw the lacing to its middle through this hole, lace each way to the edge and back to the middle again, and you will have a smooth joint.

COMPLETE MILLS EASILY KEPT SO.

WE find, as a rule, says a milling writer, when a new mill is completed and ready to start that something is always lacking in the mechanical construction. It will not require very close inspection to notice many points about the mill that lack finish. This is particularly noticeable where the finish on the various machines, elevators, spouting, etc., is very elaborate, causing a great contrast to the rough edges here and there. It is surprising why these things should be overlooked and suffered to go unfinished. It is perhaps owing to the miller's and mill builder's extreme gratification over getting a mill successfully started and making superior results, that these little things are entirely overlooked.

Operating millers will certainly take much more pride in keeping up a mill that is properly finished, to a standard of perfection. This might well be compared to the man who buys a new suit of clothes. If the suit is a perfect fit he will naturally take good care of it, and will brush it carefully. He will have it repressed and cleaned occasionally. On the other hand, if the suit does not fit him properly, he will be very careless with it, regardless of the price of the material. It is pretty much that way with the miller and the mill he is to operate. It is not alone that he will exert himself to keep the mill looking well, but he will strive to have every machine and all bearings run smoothly. He will see that belts run properly, without running to one edge of the pulley. By keeping the mill a model of neatness, he will necessarily keep it clean, and will observe at a moment's notice, any leaks in machines, elevators or spouting. He will not be content to resort to a piece of old ticking to temporarily plug up a leak, but will make every effort to make all joints perfectly tight by means of the same material that the millwright should have used. It often happens, as a matter of course, that millwrights are not always at fault when leaks present themselves. In a well regulated mill of this kind will always be found a chest, well stocked with tools, and they will always be found in their allotted place when not in use somewhere in the mill. It is not likely that one will find a scrap pile under every stair landing, of trash, consisting of old pieces of packing, scraps of hose, belts of all sizes, elevator cups, bolts of all kinds, etc., all mixed up in a heap. One would naturally infer, therefore, that it will take a very small outlay to make a mill complete, when compared to the great advantages to be gained thereby.

HOW OFTEN THE SAME COGS MEET.

IN former years, when wooden cogs were used in all kinds of gearing, and in wooden wheels as well, the makers were anxious not to have the same cogs come together too often; because, if both happened to be soft they would wear out the more rapidly; or if one was very soft and the other very hard the soft one would wear very rapidly; either way the wearing would be very uneven, and to secure an even wear on the cogs a frequent interchange of relations was desirable and sought after in the construction of wheels. The matter is not so important now, as iron or iron and wood are used for the purpose. Still, undoubtedly, frequent interchanges of relations between the passing teeth or cogs, is of more or less benefit in securing even wear. The rule for determining the frequency of this interchange, or how often the same cogs will meet, is to divide the cogs or teeth of the pinion into the cogs or teeth of the wheel. If the result is even, without a remainder, as four divided into sixteen, the same cogs will meet at every revolution of the wheel. If there be a remainder, divide it into the teeth or cogs of the pinion. If even the quotient shows how often the wheel will revolve between the meetings of the same cogs. If, however, there be a remainder, the wheel will revolve between meetings as often as there are teeth in the pinion; and that is the greatest difference that can be obtained under any circumstances. The rule is curious, if not very useful.

THE HEAD MILLER.

EVEN to be a successful head miller, says Milling, qualities must exist in his make-up of sufficient quality and kind to render him equal to the occasion, and the quality must be genuine. He need not be a great scholar and fluently speak a half dozen languages, but of necessity he must possess a pretty sound knowledge of the English language and mathematics, together with the principles and uses of the draughting board. The day of large margins is past and exactness becomes an expedient; the guess business is supplanted by perfect knowledge of, first, what is required, and in the next place how to produce. Capacity, yield and percentage are the milestones along his daily route, pointing their fingers before and behind, lucidly guiding onward to full attainment or lamentably distancing the required goal. Education is a requisite in such a position or some one has to do the figuring, and oftentimes chagrin takes the place of confidence, and morbidity is its companion. Guessing at results is one thing, but figures never lie when naturally applied, and old Davy Crockett used to say: "If you want a thing well done, do it yourself."

An old adage says very pointedly: "You can't make a silk purse from an old sow's ear." Neither can a successful miller be made of gas and buncombe. Progression without pretence, individually far removed from copyism, perseverance, observation, aptness for position, firmness, penetration and the like accompanying virtues are essentials requisite for an ideal composition of a head miller, and when unaccompanied by the natural vices of bad, dissipating and desolating habits, the individual goes from success to success naturally.

VIEWS AND INTERVIEWS.

Busy Men.

We have all met the busy, busy man, so busy that he has scarcely time to eat his meals, and sleep is a matter of indifference to him. He is, in his own judgment, burdened with work, and yet, placed alongside of a neighbor who, seemingly, has leisure for many things, he does not get through in any one day more than a tithe of the actual work accomplished by the quiet going neighbor. The difference between the two men is in methods of work. A writer on this line has well said: "There is a vast difference between the systematic, methodical, regular, steady going business man and the one who flies off the handle, and never gets time to properly oil up. The true business man never finds time too precious to waste in frivolous things, but he has always time for a pleasant word for those around him. He works like clock-work, and takes time to get around before he runs down. He keeps his hands busy as well. He never wastes time in long stories and useless talk argument. He works easily and smoothly because he is systematic. He finds time to eat his food with a relish, to sleep and rest, to get acquainted with his wife, and play with his babies. He never says: 'I had no time to attend to that little matter,' because he is punctual to the stroke. He is like a time-piece well regulated. If he does go on tick he is punctual to the hour. He strikes 'while the iron is hot.' He keeps all his appointments and engagements to the letter, and those with whom he deals know that they can trust and depend upon him. He is a good time-piece, and all men look up to him with confidence, that they will never be too late for the train."

Early Milling in Scotland.

In vol. 23 of the proceedings of the Philosophical Society of Glasgow, now in the press, there is an interesting paper on "The Rural Economy of Scotland in the Time of Burns" (1759-96)—a period which may be regarded as practically co-extensive with the latter half of the eighteenth century. The author is James Colville, M.A., D. Sc. (Edin.), and in the course of his paper, which was communicated to the society last session, the author makes a number of references to the milling and baking and cognate features of the "rural economy" of the people in that most interesting period of the history of Scotland. He makes quotation of a couplet from "The Twa Dogs" of the national poet—

> "Our laird gets in his racket rents,
> His coals, his kain, and a' his stents" (dues)—

and he goes on to say that the Earl of Aberdeen had a granary at Tarbat, in eastern Ross, which held 600 bolls of corn yearly. In the dearth of 1782 the people of Tarbat stopped a ship laden with teind corn for Greenock. As regards multure, he says that at Rutherglen, near Glasgow, by 1793 the burgh lands were thirled one-fortieth, with bank-meal to the miller and to his knave or man. Kilwinning, in Ayrshire (an important place in the early history of Scottish freemasonry), was thirled to the Abbey and to Lord Eglinton, whose family-seat is near by. Paisley was thirled to the Abbey one-twentieth, besides knaveship. In Nithsdale, Dumfriesshire, multure was held to apply to wheat (one-seventeenth), though the laird had no mill to grind it. It has been an ancient obligation to take all the corn to the baronial or Abbey mill; hence the farm was said to be "thirled" or astricted to this mill, and had to pay a vulture or portion of the meal to the miller, sometimes as high as one-twelfth. Horse and seed corn were excepted. The portion of corn taken to the mill each time was called a "melder." Tam o' Shanter's wife Kate complained

> "That ilka melder wi' the miller
> Thou sat as lang as thou had siller."

Dr. Colville says that in consequence, no doubt, of these exactions, the quern, or primitive hand-mill, was in constant use, and in reference to this ancient mechanical contrivance the poet Robert Jamieson wrote—

> "The cronach stills the dowie heart,
> The jorram stills the bairnie,
> The music for a hungry wame
> Is grindin' o' the quernie."

He also states that in the north querns are still in use, and that a livelihood is earned by making and selling them. They cost 3s. 6d. to 5s. each.

Obeying Orders.

Everyone does not heed the injunction of Holy Writ, "Servants be obedient to your masters." Sometimes this disobedience is the outcome of a spirit of insubordination, a determination to have one's own way and to resist dictation from others. But with some it is an exercise of personal judgment, believed to be justified by the circumstances of the case, and in the interests of the one served. Nevertheless, it is a violation of instructions from one in authority, and where in one case it might prove beneficial, it might at another time prove disastrous. We have this feature of the case very forcibly illustrated in a story that is told of the Rothschilds. Several years ago these wealthy Hebrews had a large quantity of cotton in New Orleans which they instructed their agents to sell when cotton should reach a certain price. The agent, believing that the price of cotton would go beyond the figure named by his employers, held on till he was able to sell at a price that netted $40,000 more than he would have got for it if he had obeyed his orders from London. He joyfully informed his employers of his success, supposing they would share his satisfaction at the result. Imagine his surprise and chagrin when he received a reply saying in substance: "The $40,000 you made by disobeying your instructions is not ours. It is yours. Take it. Mr. X., your successor, starts for New Orleans to-day." It may seem difficult at first thought to understand this action. With the greed for gold that influences many men, and which was a strong characteristic with the Rothschilds, there are perhaps few who would have acted as did these millionaires. But as has been remarked by one commenting on this case, supposing, instead of making the $40,000 by disobeying instructions, that amount had been lost. That was probably the view taken. It was not because of the gain or loss in this particular instance, but because of the loss of dependence in their employe, and the possibility of results from a future disobedience of instructions. It is always well to follow instructions, for, in that case, no blame for consequences is possible. The printer's rule to "follow copy, if it goes out of the window," is a pretty good rule to adopt in any business, and, if the agent follows instructions, he is safe in the event of any trouble which may be the result.

COOLING A HOT BEARING.

WE found an engineer the other day hard at work over a hot crank-pin. Not an uncommon thing to find by any means, but this engineer declared he had run engines just like this one before, but this engine was the only one of the lot that would give him trouble. Every time there was a considerable change in the load this pin commenced either to develop an ugly pound or to heat, and while it was cured of the pound by relieving the load, the heating of the crank-pin needed more heroic measures. His assistant had a stream of water on it, but he suggested kerosene and plumbago as better and states that it is the only thing that will cool that bearing down without difficulty. It isn't a permanent cure, however. But to judge by what was said there was nothing like kerosene and plumbago for a hot box.

Another engineer that we know of always asserts that the only thing that will cure a bearing that gives him trouble is white lead and cylinder oil mixed. Black lead and plumbago and oil, he declares, is of no earthly use. In fact, he so treats all of his bearings, gives them a coat of white lead and cylinder oil. He says it makes the bearing look, after a little while, just as if it had been running all right for years. He was painting some bearing one day when a hand asked him what he had, and was told white lead and oil. The helper concluded that was just what he wanted to do, a little painting on his own account, so he quietly appropriated the can of white lead and oil at the first opportune moment. That painting job hasn't dried yet, and the engineer doesn't think it ever will, but the helper hasn't ceased to wonder what was the matter with that paint.

It is a very common thing to find mechanics in mills who will insist that there is nothing like soft soap to cool down a bearing when its gets hot, and most of them keep a barrel of soft soap handy for the hot box that is always showing up. "I can have a room full of smoke from a hot bearing," remarked one, "and when I get up on a step-ladder and pour some soft soap on it that settles that hot bearing." We remember hearing a cotton-mill engineer telling once how he got deceived on this soft-soap question. The bearing was smoking pretty badly when he sent a boy to the soft-soap barrel, but, unfortunately, next to the soft-soap barrel was one filled with "blackstrap and oil," used to soak the picker straps in, and the boy brought some of this mixture. It looked like soft soap, and numerous attempts were made to mix it with water, but they didn't succeed, and finally the whole was poured on the bearing as it was. It took a long time to cool down that bearing, and every one waiting seemed to make it longer, and at the end it dawned upon the mechanic what the trouble was. Next time he will go after the soap himself, or remember that soft soap ought to mix with water.

As touching on the use of soft soap, an engineer showed us the other day a bearing on a calico printing machine upon which bearing a very heavy load was occasionally placed, and the shaft becomes almost at a low red heat so that it would seem that it must bend. The "only thing" that will cure this bearing is a bar of common soap laid upon it. It seems to take the heat right out of it and allow the machine to run without heating so long as the soap is in contact. It is not safe, of course, to say that a certain remedy is the only one for any particular box, but engineers evidently think so sometimes, and their experience would seem to bear them out. We remember an old engineer once telling how stupid some people were to put cold water on a bearing. "What they need," he said, "is soapy water. He will find his hands don't slide over one another very well, because there is no lubricating property in the water. Put in a little grease and you not only take hold of the dirt but you will find out that the soap is a lubricant." And yet another engineer told us of his experience as averse to soap. He said that after using it a little while it cut the brasses. Our own preference is in favor of graphite and oil mixed, though we have used soft soap and water to cool down a bearing quickly. When kerosene is used with the graphite the kerosene gives to the mixture a penetrating quality that allows it to work under narrow spaces.

PRACTICAL NOTES FOR MILLERS.

Never fail to have the burrs in perfect face, evenly dressed, well balanced and in good running order in all other respects, or poor work will result.

Bran should be packed in sacks as fast as made, the stream running to the packer continuously. If allowed to fill up in bulk the packer handles it but poorly, because it lodges and chokes so easily.

Mills of large capacity and making more bran than can be disposed of at the mill, should be provided with a good bran packer. Large quantities of bran can thus be compressed into common size sacks and quite convenient for shipping.

All makes of water-wheels cannot be the best; there is certainly some difference, and some must be better than others; but there are many real good ones, and from the old and well-tried wheels but little risk is to be run in making selections.

Water-power millers might find it to their advantage to put in a heating plant that could be utilized for heating both the office and other parts of the mill, and heat the wheat at the same time when wheat-heating is required. It would be an economical combination.

It may or may not be conducive to the general health of the people to leave germ, bran and other impurities in the flour, but the miller that separates all such impurities from his flour and makes it as pure as possible, will have much the largest and most prosperous trade. The people will be in the fashion, regardless of health, and so must the miller.

Cloth neither makes nor unmakes flour. Its functions are purely and only that of making separations. It cannot take from flour any of its bread-making qualities, nor can it add any to it. Very fine bolting cloth may increase the color of the flour because it separates from it a greater quantity of fine impurities than coarse cloth would do, and for the same reason a whiter loaf of bread might result, but otherwise no change would be made.

DIGGING through a lot of exchanges lately I came across the following letter in the New Era, of Clinton, Ont. The letter is written by a well-known resident of that town, who at present occupies the position of freight-conductor on an American road. Perhaps some reader of the MILLER can throw light on the subject. The epistle reads: "By the way, one night, not long ago, I picked up a car of flour at Staunton, Ill., a small mining town about 38 miles east of St. Louis, for a large biscuit firm in Toronto, Ont. Now, I have always been of the opinion that there was no better flour made than in Ontario. How is it that this firm buy flour (and of course have to pay the duty on it) in the United States. The mill where the flour was made is about the size of the Clinton flour mill and do a local business, that is buy only local wheat, same as the Clinton mill. I would like to be enlightened on the subject, and it may also prove of interest to some other readers of your paper."

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"Flour trade don't look up much," said Mr. J. L. Spink, the newly elected treasurer of the Toronto Board of Trade, and one of the best known millers in the province. "Trade is quiet and prices low. I am of the opinion that Canadian millers will not make a very great display at the World's Fair. I held this opinion from the start and opposed the proposition at the meeting of the Dominion Millers' Association. Our people do not enthuse very much over the coming exhibition. And it would be better to make no show at all than a poor one."

* * * *

The subject "Grading of Wheat" gave rise to an interesting discussion at a recent meeting of the Brandon Farmers' Institute. MILLER readers will be interested in the views expressed by a number of the speakers. Mr. Charles Braithwaite advocated more grades and numbering them from one to ten without other names. By increasing the grades farmers would get better prices for wheat as the drop in price between the grades would be less and wheat that was say two cents in milling value below any grade would not have to be sold at ten cents below. A very different view was taken by Mr. J. S. Thompson, president of the Melita Farmers' Institute, who condemned the system of grading as a fraud and said that it was neither advantageous to farmer or buyer. Mr. Kenneth Campbell, a grain-buyer of Brandon, read a paper in which he went very fully into the subject. He was convinced that buyers could not manage without the grading system, nor did he agree with Mr. Braithwaite in increasing the number of grades. We were in a different position to any other wheat-producing country as we produced so many different grades which was not the case in other countries and this made it difficult to perfect a system of marketing. Various other views might be summarized thus: "Farmers were often to blame for marketing dirty wheat, and it was quite right to reject smutty wheat." "Did the men who made the grades understand anything about wheat?" "Should be more grades and they should be permanent." "Farmers should be equally represented on the board of grain examiners with the grain buyers."

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President J. A. Mitchel, of the Winnipeg Board of Trade, lays considerable stress, in his annual address, copy of which has come into my hands since the January MILLER was issued, on the excessive cost of exporting grain from Manitoba, on account of high freight rates, which in view of present low prices for cereals, renders the production of coarse grains for export unprofitable and leave but a small margin of profit on wheat. He showed by statistics the high value of water transportation and dwelt upon the great advantage which it would be to Manitoba to have a deeper navigable channel from Lake Superior to the seaboard. The difficulties in the way of exporting crops via New York were also dealt with. The Manitoba crop comes to market too late to permit of its export via Montreal to any great extent. A good deal goes to New York via Buffalo in bond, and its identity has to be preserved, which causes it to be discriminated against in transit, thus increasing the cost of export. There is increased cost of exporting in bond, besides numerous delays and annoyances which have to be endured, which are very trying to the shippers. The transportation companies discriminate against the Canadian grain, because of the trouble of handling it in bond and preserving its identity, and when there is a rush of traffic our shipments have to suffer from being obliged to ship through a foreign port. Commission men at ocean ports also demand something extra for handling our wheat, on account of the extra trouble connected therewith. Another point referred to is the fact that the holder of Manitoba wheat in New York can not take advantage of any rise in price above export values. Being held in bond it can not be sold on local account at any United States point. What the president wished to show is the necessity existing for the improvement of the Canadian canals so as to admit of the export of a larger part of the crop via our own port of Montreal. The removal of the duty from wheat imported into the United States would, of course, do away with all the difficulties of export via New York, Boston, etc.

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The Executive Committee of the Dominion Millers' Association is anxious that Canadian millers should make a creditable display at the World's Fair in Chicago. Secretary C. B. Watts says "that 240 square feet of space at the Fair have been secured for the members of the Association. This is an opportunity such as has never before been afforded us of bringing our flour before the importers from various parts of the world, and we trust that every miller who does now, or hopes to do, an export business will prepare an exhibit that will assist this object. As the United States have, during this last year or two, been making strenuous efforts to extend their export trade with Great Britain, the West India Islands, and the various parts of South America, a large number of buyers will undoubtedly be present who have never visited any former exposition, thus affording us an unparalleled opportunity of bringing before them the fact that Canada could cater to their needs in all lines which our southern neighbors can do, and to some of them to even better advantage. The committee would suggest that flour, mill offal, oatmeal, etc., be only sent for exhibition in export packages, such as are suited for the various countries of which the exhibitor wishes to secure the trade. For instance: bran and mill offal should be put up in sacks of 112 pounds; flour, in 140 or 280 pounds; flour in barrels for the West Indies trade should have round hoops, and a barrel of small size, similar to that used in the United States. Any millers preparing a special exhibit, in fancy style, will be given as advantageous a space as possible to show the same. The Provincial and Dominion governments have collected a magnificent exhibit of grains, which will probably surpass anything exhibited at the Fair, and it will be to our interests as millers to show the numerous visitors that we have the facilities for converting these grains into the finest of flours, that are equal to any made in the world." Exhibits must be ready for shipment by the 25th inst.

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The mill-furnisher is frequently the butt of considerable irony at millers' conventions and wherever millers congregate in any numbers. I am not so sure that there was not a sprinkling of irony mixed with the catholicity of view which caused the Dominion Millers' Association to broaden their act of incorporation so as to admit the mill-furnisher as well as the miller to membership in that excellent organization. The mill-builder is blamed when the mill doesn't run right. That is human nature. We all throw the blame on some one else, whatever the work. None of us make mistakes ourselves. But let the agents of mill-building houses meet and "talk matters over" and mill-owners are likely to hear another side of the story. Such a conversation occurred recently between a mill-furnisher's agent and a competitor. The one was asked why it was that he had so much trouble with a certain mill started but a few days before. The other made answer that it was all the fault of the mill-owner, and gleefully remarked that the latter also had to pay the bill. Then he explained that the man for whom the mill was built was in a great rush to have it finished. Anything like delay made him nervous. "He would get the fidgets on the slightest suspicion of provocation," continued the agent, and all I could do was to rush things along at the mad gait which seemed to suit him. If we needed a certain kind of lumber that we could get the next day he wouldn't listen to it. 'Use the kind you have,' he would order, so we did, demolishing material right and left. I think we wasted not less than $300 worth of lumber, not to mention the extra cost of wages, hardware, etc., occasioned by his impatient desire to see the job finished 'at once.' And he is not the first one of that sort that I have met—they are more numerous than most folks think. I have always held the belief that if a man can afford to build a mill he should do himself the justice to do it properly. There is no need of devoting a year to the task, but I'd rather do so than throw one together in a few weeks. And another thing I'd do: if I had a contract with a responsible mill-builder who guaranteed results, I'd let him alone and permit him to build the mill as he planned it, for no man can afford to change plans at random; good mills are not built that way."

* * * *

We learn from one another; and the information imparted by a man who has an experimental knowledge of the subject he talks about is worth heeding. This man may be one's next door neighbor, or he may claim an allegiance to another flag. Knowledge knows no territorial bounds. I say this much in giving to MILLER readers some sensible remarks made by Mr. John Metherell, head miller of Union Mills, Nashville, Tenn. He is talking of success in milling and who does not wish to reach that goal? "Primarily in this particular," says Mr. Metherell, "is the selection of grain. Good flour was never produced by the use of poor wheat; still, cupidity, in many instances, induces the buyer, and when such is the case, the miller has a hard time in trying to work out an impossibility, and, if he is not familiar with the nature of given varieties of wheat, he, himself, will always be in hot water and keep it steaming, to affect all others who come under his command, and what is worse, be himself subject to insult from his superiors and still be powerless to controvert the attack. No spring wheat miller who expects a heavy percentage of middlings from which to produce his patent flour would enter the granary of soft wheat for purchase. If he did so and expected his head miller to produce his requirements he would either be a fool or a knave; a fool in not possessing the necessary knowledge for purchase, or a knave in trampling on the credulity of an honest miller, though void of information. The same mill operated on various kinds of grain produces results as varied as the grain submitted to operation. No miller, however great his egotism, can counteract the effect of the natural composition of the grain submitted to his use. Yellow wheat will produce yellow flour in spite of every attempt to remedy, and white wheat of various varieties will produce something far removed from white flour. Suitable for the grades required must be the attendant wheat supply, and the knowledge of purchase must essentially govern, by possession, the purchase of the buyer. The qualities of flour produced from Lost Nation wheat, raised in the Northwest, compared with its sister varieties of hard Fife, etc., will present quite a contrast in comparison, percentage and dollars and cents. Likewise, is found a disagreement between the results effected in winter wheat mills, where an interchange exists between Mediterranean and sister varieties, compared with Fultz and its class. Even if the desired wheats are not to be procured, the knowledge of attendant results must be known to render a composed mind and courteous disposition. 'Knowledge is power,' and 'a little learning is a dangerous thing,' but in order for a miller to mill with economy he certainly has to possess full knowledge of the effects of his wheat supply, and when his requirements are met in this direction his battle is half won, and it is left for his mill and his knowledge of milling to produce just what his office expects of him."

OATS AS A FOOD PRODUCER.

THE oat when considered in connection with the cereal grains, and the nourishment and value it affords to the live stock of the farm, says a writer in the Miller, of London, Eng., may be regarded as one of the most important crops produced. Its history is highly interesting from the circumstance that in many portions of Europe it is manufactured into meal, and forms an important aliment for man's consumption ; one sort, at least, has been cultivated from the days of Pliny, on account of its fitness as an article of diet for the sick. The country of its origin is somewhat uncertain, though Colonel Chesney, in his exploring expedition in Mesopotamia found a kind of oat on the banks of the Euphrates, which is described as about eight inches in height and covered with fine soft hairs on the leaves, especially near the ground. About half-a-dozen spikelets formed a little terminating panicle, and each spikelet contained from two to three florets, with long intermediate dorsal awns. Another oat resembling the cultivated variety is also said to be found growing wild in California.

This plant was introduced into the North American Colonies soon after their settlement by the English. It was sown by Gosnold on the Elizabeth Islands in the year 1602 ; cultivated in Newfoundland in 1622 ; and in Virginia prior to the year 1648.

The oat is a hardy cereal grass, and is suited to climates too hot and too cold either for wheat or rye. Indeed its flexibility is so great that it is cultivated with success in Bengal as low as latitude 25 degrees north, but refuses to yield profitable crops as we approach the equator. It flourishes remarkably well when due regard is paid to the selection of varieties throughout the inhabited parts of Europe, the northern and central portions of Asia, Australia, southern and northern Africa, the cultivated regions of nearly all North America and south America. The cultivation of oats is very general throughout the whole of Scotland, Ireland, Wales, and the north and west of England. In the former two countries it forms a prominent feature in nearly every rotation of farm crops, and although less so in the districts of England referred to, yet the practice is sufficiently common to warrant us in classifying them along with Scotland and Ireland, as possessing a soil and climate adapted to the special requirements of the oat plant. Scotland, however, may be considered as the proper type of an oat-growing country. Its climate is cool, even in the warmest parts of the country, and the soil is generally well adapted to the growth of this grain. It is not without reason, therefore, that oats form the staple agricultural product in that division of the United Kingdom.

The meteorological influence which effect the growth of the oat plant differ considerably from those that control either wheat or barley, so much so that the very causes which conspire to render its cultivation more successful in Scotland and Ireland than in the south of England, give those countries a climatic character far less favorable to the growth of wheat and barley. But at the same time, it must be remembered that natural causes originating in the soil and climate can be considerably modified in their influences by proper cultivation; hence we find during the past five years that England has yielded on the average a greater quantity of oats per acre than either Ireland or Scotland.

The figures show that with one single exception, namely 1891, England stands at the head of the list in its production per acre of oats, Ireland has a slightly lower average yield than England, while Scotland has produced on the average of these five years 51 bushels per acre less than England, and Wales 8.7 per acre less.

There are three well defined groups of oats cultivated in the United Kingdom easily distinguishable by their color—white, black and gray or dunn. The greater number of varieties belong to the first class, and these are also the most valuable in an agricultural point of view. White oats are separated into two principal varieties—the early and the late—and these again into several sub-varieties, characterized by certain peculiarities of growth.

In the southern part of Great Britain, where oats are principally used for feeding horses and fattening stock, the main object is generally to obtain as much bulk of straw, and as many bushels of grain per acre as possible, without much regard to the quality of either ; and hence we find the coarser kinds, such as the Tartarian and the red sorts, principally cultivated. The straw of these coarser varieties make very inferior fodder, and the grain weighs very light in the bushel—more frequently 35 lbs. per bushel than above it—in consequence of the large proportion of husk to kernel developed.

In Scotland and the north of England, however, the quality of both oat straw and oat grain is a material point, as the former constitutes the principal fodder of farm live stock from Martinmas to Whitsuntide, while the latter made into meal is, notwithstanding Dr. Johnson's contemptuous opinion of it, the main article of food of the Scotch and border peasantry. The Scotch farmer, therefore, cultivates those varieties of oats which yield the greatest amount of nourishment for man and beast, and not those that afford the largest quantity of materials for swelling the bulk of the manure heap. This opposite practice accounts for the fact that the average yield of oats per acre in England much exceeds what is obtained in the other divisions of the United Kingdom, as shown in table 1.

The grain of oats consists of two easily separable parts, the husk or envelope, and the kernel or groat, as it is sometimes called. The former is hard and woody, and contains little or no saccharine, oily or albuminous matter. The kernel or softer inner portion of the grain, on the contrary, is rich in all these substances, as is shown by the following analysis :—

Showing the average chemical composition of the kernel, husk, and the whole grain of oats.

	Kernel. Per cent.	Husk. Per cent.	Whole Grain. Per cent.
Water	4.85	1.57	6.42
Ash	1.50	1.68	3.18
Oil	5-70	0.24	5.94
Carbohydrates	46.96	20.41	67.37
Woody Fibre	0.97	5.36	6.33
Albuminoids	10.02	0.74	10.76
Total	70.00	30.00	100.00

Thus the kernel gives about 5¾ per cent of oil, and the husk ¼ per cent, making a total of nearly six per cent in the whole grain.

The ash is very similar in both portions, forming just over three per cent in the whole berry.

The carbohydrates or starchy matters form nearly 47 per cent in the kernel and only about 20 per cent in the husk, equal to 67 per cent in the whole grain. The woody fibre on the contrary, is 5 per cent more in the husk than in the kernel, while the albuminoids make up 10 per cent of the kernel, only ¾ per cent in the husk and 10¾ per cent in the whole grain.

One hundred pounds of oats, weighing 45 pounds to the measured bushel, commonly yield on milling, the following proportions of oatmeal, &c :

	Per cent.
Oatmeal	60
Husks	26
Water	12
Loss	2

In a good season for oats some varieties, such as potato, sandy, dunn, and late Angus, weighing 42 lbs per bushel, will yield on milling 209 lbs of meal per quarter, or 62 per cent, while a coarser and more husky variety, such as the Tartarian and red oats, which only weigh 35 lbs to the bushel, will not yield more than 130 lbs, or at most 140 lbs to the quarter. This is only on an average about 48 lbs of meal from 100 lbs of grain, or nearly a fourth less than in the other case.

If we suppose—which is not far from the truth—that the comparative yield per acre of a fine and of a coarse variety of oats sown on the same quality of land, is 8 and 10 qrs. of grain respectively ; then according to the above data, we obtain the following results :—8 qrs. of oats, weighing 42 lbs per bushel, give 2,688 lbs of grain, which yield 1672 lbs of oatmeal ; 10 qrs. of coarse oats weighing 35 lbs per bushel, give 2,800 lbs, which yield 1,350 lbs of oatmeal. Here we have in the smaller crop, per acre, nearly 1.5 more meal. No doubt the finer sorts of oats when cultivated in the south of England will not weigh more than 40 lbs per bushel, but this weight could easily be attained by good cultivation, careful selection of seed, and occasionally changing it from a good oat-growing district.

In milling oats, the relation of kernel to waste products is generally about one-half. Some investigations by Clifford Richardson in America show that the relation of kernel to husk averages for the whole of that country seven to three, those from the western states being a little less husky, and those from the south considerably more so. It is, however, the inflated nature of the husk in the southern oats, and the fact that the glumes or outer shell is often adherent, that affects the weight per bushel more than the slightly larger size of the berry.

The extremes shown by the separated parts of the American oats were 79.28 per cent of kernel and 20.72 per cent. of husk in a sample from Washington territory ; and 55.37 per cent. of kernel, with 44.63 per cent. of husk, in a sample from Dakota. Washington and Oregon usually sustain their reputation for fine looking grain, whether of oats or wheat.

It may be mentioned that the proportion of kernel to husk in oat grain is greatly influenced by the period at which it is cut and harvested.

It is really disadvantageous to permit any kind of oats to become dead ripe before commencing to reap the crop, for although cut ten days before this, the ripening process will proceed perfectly well in the sheaf, and certainly with much less risk.

The proportion of kernel to husk will not only be greater in the earliest reaped samples, but the percentage of oatmeal will be higher also.

TRANSMITTING STRENGTH OF SHAFTING.

A WRITER in the Mechanical News says : The use of extremely heavy shafting is not advisable under any circumstances unless actually needed to perform the work required. Some imagine that a large shaft affording a very strong margin of safety, is the most economical to use ; that, however, cannot be considered a logical and mechanical position, unless tempered with sound judgment and much wisdom, sufficient of both to select properly. That there should be ample margin of strength no one will attempt to deny, but shafting multiplies in strength so rapidly as sizes increase, that the unenlightened are apt to make the selections much too large when aiming at only ample strength margin. To show how easily uninformed mechanics may make mistakes of that kind, it is only necessary to say that a three-inch shaft has nearly three and a-half times the transmitting strength of a two-inch shaft. None unaware of the fact would ever guess at that difference and may fall into the error of selecting a three-inch shaft to safely do the work of a two-inch. To more forcibly illustrate the difference, it can be stated that a two-inch shaft properly sustained with bearings at reasonable intervals will safely transmit 20 horse power at 100 revolutions per minute, and at the same time resent the transverse strain due to weight of pulleys and the pull of belts necessary for transmitting that much power. Under like circumstances and equally proportionate condition, a three-inch shaft will just as safely transmit sixty-eight horse power at 100 revolutions per minute. Shafting should never be so large as to make it absolutely rigid ; on the contrary, it should be to a fair degree elastic, with an ability to give and take between the power and the work. When too rigid, unless above all requirements in size and strength, the liability to break is increased, especially if the work is of an abrupt and severe character. Long lines of shafting having the power at one end and the work at the other, should be graduated in size ; the work and being of a size required to safely do the work and the power end larger in proportion to the length of the shaft or the distance between power and work. If such shafts be of the same size the entire length, and that of a fair working size only, there will be too much elasticity in the aggregate which will tend to gradually weaken, distort, and in the end destroy the usefulness of the shaft.

Because a man has a husky voice he is not necessarily a corn doctor.—Utica Observer. Nor if he is mealy-mouthed does it follow that he is a miller.—Millers' Review. Nor is the baker, who always kneads something, a beggar.—Milling World. Nor is the confectioner with a good pull a politician, necessarily.

THE Canadian MILLER AND GRAIN TRADE REVIEW

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

ORIGIN OF FYFE WHEAT.

A DISCUSSION has been going on in a number of newspapers lately, endeavoring to locate the origin of Fyfe wheat. The Elevator and Grain Trade Review, of Chicago, places the origin of this wheat in Manitoba about 1858. The story is that when Selkirk brought over his Scotch colony to Manitoba about 1858, he purchased for them a supply of seed wheat from a Scotch settler named Andrew Fyfe, which was so different in character from the rest that it was kept separate and sown by itself and called after the man from whom it had been obtained. Wisconsin has come along with the claim that this famous wheat was first grown in that state in 1856, and therefore has the advantage over Manitoba by two years. Mr. G. E. Bower, of Vancouver, B.C., alleges that both these accounts are away off, and that the true story is to be obtained from Dr. James Fyfe, of Peterboro, Ont., a descendant of the original grower.

Another account is given by Mr. Robert Reed, a miller, of Snelling, California, who writes to the Milling World, of Buffalo, as follows: "I was learning my trade in 1857, and I remember well grinding that same kind of wheat. That was in Fergus, Wellington county, Ontario, Canada. The wheat was so hard that we always ground with dull buhrs, and the millers would not buy it at all, it was so hard. They had all been used to a 'Club.' They called it a 'Genesee club,' but it began to rust so bad that the farmers could not grow it. The reason they sowed this hard or 'Glasgow' wheat, as it was called then, was that it withstood the rust. Now, judging from the amount of wheat that was grown there then, it must have been introduced some two or three years previous to that time. Then it was called 'Glasgow' or 'Fife.' We had to grind lots of it because the mill did a great deal of gristing, and we ground every one separately. I have been away from there about 19 years, but there must be some of the old-time millers alive yet. I had an uncle there, but I don't know where he is now. There are Hostop & Arkell, of Elora, and I think there is a lot of old-time millers who could tell you that kind of wheat was introduced there several years prior to that time. I can not vouch for it. That is the earliest that I recollect. I don't know the reason it was called 'Glasgow.' I understood the first seed came from there, and I think it came as early as 1854. It must have done so, by the amount that was grown in Wellington and Grey counties at that time."

The Milling World itself, which is nothing, if not critical and sceptical, would throw doubt on any attempt to identify the name or origin of Fyfe wheat with Scotland or Scotchmen, and says: "What evidence is there to show that Fyfe wheat came from Scotland? Old farmers who have lived in those parts of Scotland in which wheat is grown, say that they never saw any of this particular grain in Scotland. What proof is there that it was not grown in Wisconsin or some other parts of the United States before a kernel of wheat was grown in Manitoba? What proof is there that the name of "Fife," or "fife," or "fyfe," or whatever one of the various spellings may be selected, has reference to a person, or that the term "Scotch" is not, like "English" applied to walnuts never grown in England, a purely accidental name? One old wheat-grower says that the name fife was given to the wheat because the farmers' boys used to cut the stalks into small whistles, on which they produced musical, or unmusical, notes, and which they called "fifes." In that case it would be easy to account for the term "Scotch fife," although none of that sort of wheat was ever known or grown in Scotland."

The burden of evidence would seem to show that this wheat had its origin in Canada, whether in Ontario or Manitoba may be uncertain, and that its antecedents can be traced back to the Land O' Cakes. Perhaps some readers of the CANADIAN MILLER can throw further light on the question.

SPECULATION NOT GAMBLING.

THE United States Senate has finally passed the Anti-Option bill by a vote of 40 to 29, and it will likely receive the concurrence of the House of Representatives, and become law. The primary object of the bill, over which has been waged a vigorous fight at Washington, is to suppress gambling in grain.

The speculator, some one has said, is a curse. "He doesn't work, but he bets on the results of the labor of others; and that he should thrive and they suffer makes either a farce or a tragedy of life." In so far as speculation partakes of this character all honest men are, we believe, solicitous of its suppression. But speculation is not gambling. Legitimate business of whatever kind is speculation, and the man who conducts it is a speculator, but he is not necessarily a gambler.

It is perhaps the misfortune of the grain business that gamblers have entered into it and prejudiced, less or more, the entire business. The law is called upon to step in and suppress the gambler in grain, but not the grain merchant. In Toronto the authorities have the support of every worthy man in their efforts to close up the bucket shops that have endeavored to secure a resting place here at various times. But what righteous indignation would be evoked from the best men of the city were an effort made to suppress the legitimate business in grain conducted on 'Change any lawful day of the week. As a protest against this class of interference has come, in part at least, the opposition to the anti-option bill during the past few months. It is feared by some that the good will be made to suffer with the bad in its enactments.

* * * *

The history of legislation bearing on the supposed restriction and suppression of improper methods of conducting business is full of interest. An old English law existed in a past century against regrating, forestalling, badgering and similar practices, which were supposed to be an interference with the free course of trade. By this law dealers in food were forbidden to purchase in one market and sell in another, to buy food on the way to market, to try and control the market by purchasing the whole stock in existence with the intention of exacting a higher price, and to resell articles which had previously been purchased in the same market. Some municipal market by-laws are not without a few of these clauses to-day. The purpose of these restraints upon middlemen was to protect consumers against artificial enhancement of price.

According to Professor Thorold Rogers, the Englishman of the Middle Ages strove as far as possible to dispense with the middlemen and to buy all his goods at first hand. He had his stock of iron for tools, and employed the smith to fashion it. If he wanted a silver cup, he purchased the silver and paid the craftsman for his labor. So, if a man resolved on building a castle or a church, he obtained the raw material and hired laborers to construct it. The whole cost of the bell tower at Merton College, Oxford, in 1448 was less than £142. The cost at present would be £5,000 or £6,000. The aim of all legislation of this class is to do away with the middlemen and save his profits to the consumer. Failures along this line have been many, more than the successes, though this fact is not always an argument against the correctness of the position taken, no more than it is a deterrant to frequent and continued efforts to attain success in this way. The organization of Grangers, Patrons of Industry, Consumers' Supply Companies, Co-operative Manufactories, and other similar associations of citizens are all instances of effort to dispense with the obnoxious middleman. Somehow, though there are remarkable exceptions like that of the Rochdale Co-operative stores, these methods never grow into very large success, and often are far removed from the accomplishment of the object sought.

* * * *

Prejudice dies hard. The Duke of Wellington's advice was to live down prejudice; and it can be lived down, but it requires time and lots of patience. Tradition has told us of the rapacity of the miller. There never seemed to be any more than tradition in the charge, though legendary song and story have given ear to the slander. Members of the Dominion Millers' Association, who were active some years ago in securing needed legislation from the Commons, had to meet this kind of prejudice, and it has been the experience of more than one miller who has taken to public life in Canada that the old slanders of a bygone age would be trotted out against him, and there were those among the farming population who believed them. Happily these strained and foolish prejudices of the farmer are, unless in a few cases, extinct. Yet this kind of ammunition was made use of by several senators in their contest over the anti-option bill. One senator reminded another senator in his reply, "that all the ancient statues and common-law rules, from the earliest history of civilized governments, against forestalling and monopoly, and all that kind of oppression, which this bill claims to attempt to reach, had been rendered necessary by the conduct of millers, and that the 'miller's thumb' has been proverbial for a thousand years." This remark was supplemented later by the following scoffing words: "The constant trading and bartering make it impossible for the miller to manipulate the market now. No doubt he is an honest man now, and probably the reason we are approaching the millennium is that he has not the opportunity he formerly had."

So much for prejudice; and at the eve of the nineteenth century there are to be found those who have not outgrown their prejudices.

EVOLUTION IN TRADE.

IT is the case in business of any kind when conditions are new and in an embryotic state that various difficulties have to be confronted. Sometimes these are easily overcome, but usually no small amount of experimenting, partly successful and much of it ending in failure, must be entered upon before the better methods of doing things are reached. These conditions furnish one of many illustrations of the large part the principle of evolution occupies in the life of the individual and the work of the age. With all it is a case of development from the lower to the higher, from the chaos and crudity of early conditions to the larger measure of system and perfection born only of labor and time.

Sometimes we chide ourselves for the blunders that are made and we are sure we will not be tripped up in the same way again. But we will, more than likely, go and commit some other blunder and learn again by the one rule of experience—the only road to a large part of our knowledge of life.

The farmers and grain merchants of Manitoba have for some months been worrying themselves over the misfortunes that have resulted from growing a larger crop of wheat in 1891 than they were able to handle successfully, and on which losses were made at the time and continue to be made. Only within the past month the story has been told by the Montreal Trade Bulletin of a shipment of wheat made from Manitoba to that city which was eaten up in transportation charges. The freight upon the shipment (700 bushels) amounted to $290, which was considered by the consignee the full value of the wheat. Cases of a similar nature have been referred to in these columns a number of times during the past few months. In the case in point, and in nearly all such cases, it would have paid the shipper to have kept the grain at home. The Montreal journal

advises the farmers of Manitoba to use this low grade grain for fuel rather than ship it east. But a better use, in the opinion of the Commercial, of Winnipeg, would be to hold it for feed and market it in the shape of beef and pork. The trouble with this latter suggestion, and the Commercial recognizes it, is that while there are immense quantities of low grade grain in the country, there are comparatively few cattle or hogs to feed the grain to. Farmers might accept with profit the advice of our Winnipeg contemporary to put part of the money used in growing grain into the purchase of cattle, and in this way help to level things up.

We have no doubt that along the lines suggested by the Commercial, or in some other way deemed equally practicable, the farmers of this newer province will meet the difficulties that are just now confronting them, and in the end successfully overcome them. This will not be done, however, at a bound. They will have to grow into successful methods through the avenues of patience and perseverance, and after, doubtless, further tribulation. But in this there is nothing discouraging. On the contrary, there is everything to furnish encouragement and stimulus, on the principle that we climb the ladder not by a single bound, but we mount it, as the poet has said, round by round.

All this may seem like a homily more suited for the pulpit than the columns of a trade journal, but where more than in the daily affairs of life do we need to take a hopeful view of the conditions that surround us and be possessed of a knowledge of the environments and principles that regulate matters of life, whether they be those of morals or business?

LONGEVITY OF MILLERS.

Mortality statistics might be expected to have a depressing influence on men generally, and yet the anxiety of human nature to know what is in store for them in the future makes their study of more than ordinary interest. An English physician, William Ogle, M.D., has been making a study for some time of the question of mortality in relation to occupation. "Am I engaged in a business which is likely to shorten the expected term of my life?" is a problem that naturally gives concern to many men. There are vocations, certain departments—for example, the manufacture of steel and other metals—where the heated atmosphere is so excessive and impure that workmen can only remain at the work for a few years and be assured of a continuance of life; and even then they, commonly, retire with constitutions so shattered that life, under the most favored circumstances and tenderest watchfulness, cannot be prolonged more than a few years.

The dust-inhaling occupations are usually looked upon as fatal to sound health, being almost certainly productive of consumption and other lung diseases. Dr. Ogle, in a ten years' research and gathering of data, touching thousands of cases in England and Wales, furnishes much valuable information regarding this class. Taking fishermen for the standard, as being less liable to dust-inhalation than any others, he has given us the following table:

Men from 25 to 65 Years of Age.	Phthisis.	Lung Diseases.	Phthisis and Lung Diseases.
Fishermen (as Standard)	55	45	100
Carpenters, joiners	103	67	170
Bakers	107	94	201
Wool-workers	130	104	234
Cotton-workers	137	137	274
Cutlers, scissors-makers	187	196	383
File-makers	219	177	396
Masons, bricklayers	127	102	229
Stone and slate quarrymen.....	156	138	294
Pottery-makers.....	239	326	565
Cornish miners.....	348	231	579
Coal miners	64	102	166

Millers and bakers rank the same, being 172, which strikes a fair average among the various occupations. Grocers, shop-keepers generally, machine-builders, carpenters, shoe-makers, lawyers, coal-miners and a few other occupations were healthier than milling and baking, while most other mechanical occupations were less conducive to long life.

It is worthy of note that in Dr. Ogle's opinion the dust of flour which is inspired by millers has no injurious effect on their vitality. What of the "miller's cough?"

As touching in their way two opposite ends of the pole, it may be added that clergymen head the list for the greatest longevity, whilst inn-keepers show the greatest mortality, even in excess of the liquor dealers, who rank well in this respect.

TARIFF REFORM.

The one public question that is overshadowing all others in Canada at the present time is that of tariff reform, and the battle at Ottawa this session will be over the tariff. In both of the great political parties a variety of opinions exist. Even among the government supporters, who have hitherto been solid for the N.P., there are dissenting voices, and, more serious than this, leaders within the party, like Dalton McCarthy, Mr. Davin and others, have broken away, in one case altogether, and in the others in some particular point, from the Government's policy. Nor are the Liberals a unit in their views on the question. At a caucus of the party held within a few days of the present writing a policy of free trade, as outlined by Mr. Laurier in his Hamilton speech, was adopted by the party, but not without expressions of dissent from Sir Richard Cartwright and his followers, who favor unrestricted reciprocity.

The battle will likely wage between a modified National Policy on the one hand, as promised by the Minister of Finance, and the Free Trade policy of the Liberals, with, perhaps, no uninfluential following of Mr. McCarthy, who stands as the champion of preferential trade with Great Britain.

Whatever the final outcome of the present battle may be, the country will, we believe, be the gainer. The best men of Canada—not the men who are politicians first and patriots afterwards, but her most patriotic citizens, her princes in commerce, leading bankers and ablest students of economic questions—are writing, speaking and giving their clearest thoughts to the subject. Good, and only good, can come out of consecrated common sense, ability and patriotism exercised on these lines. National disorders and crude legislation on momentous questions come too often from indifference to these matters by the men who, though not the noisiest or most demonstrative, are best fitted by natural gifts and training to settle these problems. It is a good thing to find these men roused on the condition of the country to-day.

COOPERAGE MATTERS.

An intimate relationship exists between the cooperage trades and milling. In some cases millers have cooperage shops as adjuncts to their mill and make up a large part of their own stock. But following the trend of business methods in the present day, it is found that it is well for the miller to be a miller, and to depend for his cooperage supplies on the man who makes the manufacture of cooperage stocks his special business.

Attention has been drawn in the current number of the Canada Lumberman to the scarcity of basswood the past season to meet immediate needs for orders in coopers' hands, the fact being used by our cotemporary to illustrate the extent to which the forests on the shores of Lake Erie have been denuded of many of their more valuable woods. This condition is emphasized in a letter to the Miller from a large manufacturer of cooperage stocks in western Ontario, where the remark is made that "the demand at present for dry staves is very lively and most manufacturers are not able to take care of orders coming in. High prices are maintained for shipments to the 1st of May, and all manufacturers that have dry stock find no trouble whatever in obtaining ready sale. The market is bare of dry stock, heading being so scarce that consumers find great trouble in being able to obtain sufficient to meet their daily requirements, and in many cases high figures have been paid by firms that have bought in the open market not having contracted for their requirements ahead."

Whilst the poor of our larger cities, and not a few others who are not poverty stricken, are suffering from the severe weather of the present winter, on the principle, perhaps, that it is an ill wind that blows no one good, coopers are rejoicing at the character of the winter, which will enable the mills in Canada, Michigan, Ohio, and other points to put in full stocks of logs for running this season. Prices, however, for reasons already suggested, are likely to be high, and it is not to be expected that figures for manufactured cooperage stocks will show any reduction in '93.

The consumption in Canada and the States of coopers' stocks is steadily growing year by year, elm cooperage stocks being used for different purposes that were not thought of years ago. Manufacturers are quite hopeful of a good trade in 1893.

Commencing next month the Miller will open a Cooperage Department, conducted by one who has a thorough knowledge of the conditions of the trade in Canada and the States.

EDITORIAL NOTES.

A suggestion comes from a Winnipeg journal that it had been better for the farmers of Manitoba to have fed the low-grade wheat of 1891 to the cattle and hogs rather than ship it to points at prices which in some cases barely covers freight. This presupposes that farmers have the cattle and hogs to feed, which is not always the case. The circumstances are suggestive, as has before been intimated by those who have studied conditions in the Prairie Province, that farmers will need to give larger attention to the raising of cattle in the future to meet possible exigencies in grain growing.

A despatch from Ottawa says: "An Order-in-Council has been issued fixing canal tolls for the season. On food products the toll for a passage eastward through the Welland canal will be ten cents a ton, and for passage eastward through the St. Lawrence canals ten cents a ton also. Payment of toll through the Welland will, however, entitle the cargo to free passage through the St. Lawrence canals. It will be remembered that last year the rate was twenty cents per ton with a rebate of eighteen cents for cargoes discharged at Montreal. There will be no rebate under the new regulations, but the fact that payment of tolls through the Welland ensures the free passage of the St. Lawrence is of itself a discrimination in favor of Montreal.

The new president of the Canadian Manufacturers Association is Mr. John Bertram, of the Canada Tool Works, Dundas, Ont. His predecessor was Mr. W. R. McNaught, whose interest is in the manufacture of watch cases. Mr. McNaught favors preferential trade with Great Britain, and he made this the keynote of his address at the annual meeting of the association a week ago. His concluding words were an appeal to the patriotism of the Canadian people, thus: "The national future of Canada does not in my opinion depend upon the good will of other countries so much so as, under Providence, what her own people make it. If we are but true to ourselves we need have no fear as to what the future has in store for us." The Government are urged to "grant a subsidy sufficiently large to guarantee the establishment of a fast Atlantic steamship service between this country and Great Britain."

The Daily News, of London, Eng., draws attention to the large decrease in English wheat acreage within the past decade. Cumberland and Westmoreland have each lost two-thirds of their wheat area. Chester, Monmouth and Northumberland have lost one-half. In Derby, Devon, Durham, Hereford, Lancaster, Leicester, Notts, Rutland, Salop, Somerset, Stafford and the North and West Riding the dimunition ranges from one-third to one-half of the acreage of 1882. In Cornwall, Dorset, Gloucester, Kent, Middlesex, Oxford, Surrey, Warwick and Worcester the decline is from one-fourth to one-third. Beds and Hunte have lost one-sixth, Essex one-seventh, Norfolk one-eighth, and Hereford and Suffolk each one-twelfth: while Cambridge has suffered a diminution of only one-fourteenth. The general result is to demonstrate that during the last decade the wheat area has undergone shrinkage in every county of England, also that the relative decrease has been greatest in the outlying counties of the north and west and least in the compact group of eastern counties lying between the Wash and the Nore.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

BRITISH FLOUR TRADE.

THE export trade in flour to Great Britain during the past season has been a constant source of anxiety to the exporting miller on this side of the Atlantic. We give expression to the sentiments of every one engaged in the business when we say that it has been a most unprofitable department of the trade. Nor has it been carried on with better satisfaction to the flour handlers in Great Britain. In a word, the market has been thoroughly demoralized on both sides. In previous issues of the MILLER we have pointed out that the cause of much of this trouble is the custom of United States millers of sending large consignments of flour to England and Scotland with little regard to the needs of the market at these points. In a recent issue of the Glasgow Herald, this phase of the question is handled with intelligence in its relations to the trade of the Scotch miller. The Herald says:

"The year now drawing to a close may truly be described, so far as the miller is concerned, as one of the most unremunerative on record. Prices ruled high at its commencement, and, with but small cessation, they have steadily declined during the entire twelve months, and now we are face to face with the lowest prices for both wheat and flour ever experienced in the annals of the trade. Several causes may be cited to account for this—primarily, no doubt, the excessive production of cereals in America; and in the second place the diminished wants of the continental wheat-importing countries. To this may be added the excessive quantity of wheat milled in America, its shipment abroad, in many instances on consignment, and its sale, ex-quay, at prices leaving a heavy loss to the exporter, and even his representative here, it is whispered, has not escaped altogether scatheless. This slaughtering, as it is called, of consigned flour has not hit the home miller quite so hard as might have been expected, as he—fortunately for himself as it has turned out—sold pretty freely for forward delivery, certainly at exceptionally keen prices; but, believing in no rise, his first thought has been to keep his mill running full time, and so make it possible to provide continuous employment for himself and his workmen. A policy this that has proved of the wisest, an operative miller among the ranks of the unemployed being at the present moment conspicuous by his absence. Wheat and flour have steadily declined in price throughout the entire year. No. 1 northern Duluth wheat, for example, which in December, 1891, touched the comparatively high level of 42s. per qr. can now be bought freely at 12s. less, viz., 30s., and millers' finest Minnesota patents, which at the same time were sold at 32s. per sack, can now be had at 25s. The fall has been even more marked in the case of straights. In December last as much as 30s. could have been made freely, while now they are a very dull sale at 18s. 6d. Patents have come so very low in price that almost every consumer can afford to buy them: hence, the lower grade has become neglected, and the disposal of their straights is now the problem to be solved by the home and foreign miller alike. As to the immediate future of the trade, it is a matter of no small difficulty to form a reliable opinion. Should the present depression in prices be relieved by some improvement in the markets, but little benefit would result to the miller, at all events for a very considerable time. This is accounted for by the pernicious system largely in vogue of booking flour forward in a lavish manner, and, in many cases, to an absurd extent, so that, while the miller is called upon to pay a sharp advance for his wheat, he has for months to deliver flour at the very lowest point touched, so that a rise in the price is oftentimes to him more a curse than a blessing. Owing to the keen competition from abroad, as well as at home, it is somewhat difficult to see how this can well be avoided, the only possible consolation to the unfortunate miller being that if, by the force of fortuitous circumstances, he ceases to merit his old-world title of jolly, he yet can lay the flattering unction to his soul that he is performing the patriotic part of perpetual benefactor to a more or less ungrateful public."

Aside from the fault for these conditions that is to be laid at the door of the exporter of flour, it will be observed that the Scotch miller has been guilty of the same unbusiness-like practices as his brethren in London and Liverpool, of booking flour ahead with no consideration as to the fluctuations in wheat that are sufficient to dish all his profits.

CANADA AND THE WEST INDIES.

In a letter to the Monetary Times touching Canadian flour abroad, and replying to an article from the Daily Chronicle, of Georgetown, Demerara, to which some reference was also made in these columns last month, Mr. J. A. Chipman, of Halifax, N.S., has this to say:

"I quote from the Daily Chronicle: 'There seems to be an old standing prejudice against Canadian flour.' I remember the time that there was a standing prejudice in the Maritime Provinces against Canadian flour. We in Halifax were then importing American flour, and the Canadian was despised as poor stuff. To-day, place Canadian and American of the same grade, at the same price, before a customer in the Maritime Provinces and he will take the Canadian in preference; especially so if the comparison is between winter wheat flour. Why? Because the Canadian winter wheat flour has more gluten and other essential elements to make a palatable bread than the American. Moreover, offer a Provincial fisherman the best American patent in a round-hooped barrel at almost any price, and, if he has passed the age of fifty years, he will shake his head; it recalls to him the time he fed on Baltimore middlings at $9 per barrel.

Just as our Canadian flours have pushed their way into these provinces, so are they getting a strong foothold in Newfoundland, and year by year crowding out the American. I know whereof I speak, for I am in constant touch with the Newfoundland trade.

In the "forties" Halifax, not New York, had the trade with the West Indies. Those were the days in which Halifax felt that she were the Hub of America. Those magnificent, palatial steamships which paddled their way from England to America made for Halifax direct. The profitable commerce of the West Indies flowed into our laps, and the banking capital of Halifax to-day was virtually created by the profits arising out of that West India trade.

I may be pardoned for quoting from Mr. Winter referred to in your article from the Georgetown Chronicle, in evidence of the fact that in the forties Halifax, not New York, held the trade with the West Indies.

"But the mode of importation in those days was very different to that by steamer. The flour then came in mixed cargoes—lumber, fish and staves. A sort of tunnel was made in the lumber, and flour, fish and other articles of that nature stowed in between the piles of lumber in a vessel's hold. I have seen the boards come out with ice upon them and have had iced drinks from it. No flour could come in good order that way. We never got American flour direct at all; it all came through Halifax.

Now this is the prejudice against flour, lasting since the forties. Whereas it was not Canadian flour that creates the prejudice, but American flour shipped via Halifax, and making a two months' passage sandwiched between frozen or wet lumber.

To further quote, the conclusion of the chairman of the committee, Hon. A. Weber, was that "there was no great difference between Canadian and American flour; that if Canadians would send good brands and pack it suitably for that market, their flour would go down as well as that from the States.

In my opinion there is no good reason why Canadian flour should not work its way in upon the West India Islands, just as it has in the Maritime Provinces of Canada, Newfoundland and other places. But in order to maintain the West India markets, we must be particular as to quality and packages, and owing to the equatorial situation of these markets, we must get at the consumer as nearly as possible, instead of shipping in quantities to agents who have been for a long time and still are agents for New York and other American houses. Those agents cannot be expected to give due attention to Canadian consignments, especially where it requires a good deal of effort to overcome old-time prejudices.

Individual effort must necessarily remain desultory in action, and more or less disappointing in results. And the only satisfactory way to develop an interchange or exchange trade between Canada and the West Indies is to form a strong association in Canada, including producers, manufacturers and others. We must ship assorted cargoes, and a combination of all the different Canadian and West India interests centered in one co-operative body will alone secure success. Such an association could learn, at a minimum of cost, the different articles which we and they produce which could be disposed of in the respective countries to best advantage."

A NEW BILL OF LADING.

Steady droppings wear away the hardest stone, and United States millers are congratulating themselves, that after years of hard fighting they are likely to get somewhere with an improved bill of lading. What is known as the Harter bill of lading has been adopted by the senate committee on commerce and it is fully anticipated by millers that it will pass the two houses of legislation to afterwards receive the signature of the president, when it will become law. When this bill becomes a law, it will be unlawful for the shipowner to insert in any bill of lading any clause whereby he shall be relieved from liability for loss or damage arising from negligence, fault or failure, in proper loading, stowage, custody, care or proper delivery of any merchandise committed to his charge. Any and all words or clauses of such import inserted in bills of lading or shipping receipts shall be null and void and of no effect. By its provisions, it will be impossible to shift the responsibility which is the chief curse of the document now in use. Between the insurance company and the steamship's responsibility, the shipper and receiver will be fully and adequately protected. This bill makes it the duty of the shipowner to issue a shipping document, stating, among other things, the marks necessary for identification, number of packages or quantity, whether it be carriers' or shippers' weight, and the condition of the merchandise covered by it. This document shall be prima facie evidence of the receipt of merchandise described therein. It provides that for a violation of the provisions of the act, the shipowner shall be liable to a fine not exceeding two thousand dollars; that the amount of the fine and costs shall be lien upon his vessel, which may be libeled therefor, in any district court of the United States within whose jurisdiction the vessel may be found.

HUNGARIAN MILLING.

Commenting on the annual summary of the Hungarian milling trade of 1892 (which is given very fully in the Pester Lloyd), our English contemporary, the London Miller, says: "Taken altogether 1892 was a bad year for Hungarian merchant millers. Several causes conspired to this end. To begin with, during the first three months of the year the Budapest wheat market was in an inflated condition relatively to the prices ruling in the rest of the world's exchanges. The great fall in the price of the principal cereal which took place at the end of 1891, as soon as it became clear that America was in a position to more than make up for the deficiency of Russia, did not, for some reason or other, extend to Budapest. This refusal to recognize facts cost the Budapest and large country millers very dear, as, paying extravagant prices for their raw material, they were naturally in no condition to compete with the millers of the United States, who, as far as prices go, are nearly always at an advantage. It is noteworthy that,

whereas in 1888 the mills of the Hungarian capital exported 770,000 metercentners of 220.46 lbs. to Great Britain, their exports last year had shrunk to some 410,000 metercentners; the same items in the exports to France are written as 170,000 and 100,000 metercentners respectively; in the exports to other lands another fall is observable, the former item being 415,000 as compared with 150,000 metercentners. The closing of the foreign markets was to a certain extent compensated by a brisk demand from Austria, in which other half of the empire a long-continued drought had put many mills out of "the running," as the saying is. Doubtless it is due to this exceptional home demand that the last month of 1892 closed at Budapest with relatively low stocks of all the higher grades of flour. The loss of the British market is keenly felt, and strenuous efforts are being made to induce the government, which owns the railroads, to assist the mills in winning back the ground lost in the United Kingdom by such a reduction of rates as shall enable the agents of Hungarian mills to undersell at any rate the American patent flours. Whether the authorities will see their way to carrying goods at a loss is, of course, another matter."

THE FLOUR MARKET.

It is much the same story of the flour market this month as last month, and for some months back—no large measure of activity prevails. Prices have not advanced as some millers thought they might when wheat showed a tendency to advance slightly. The fact is, there is nothing to warrant a steady upward tendency in wheat. British markets, as we have taken occasion to remark in another place this month, are as demoralized as ever. A good deal of competition exists in local markets in almost any part of the Dominion, and this is keeping prices down at home, though the fact that some of the smaller mills are frozen up is helpful to prices in some localities. Millers are still hopeful, however, that as the crop year comes to a completion prices will improve.

PRICES OF FLOUR AND MEALS.

Toronto: Straight roller is offered at $3.15 to $3.25. The Flour and Grain Trade Bulletin of the Dominion Millers' Association reports Ontario flour and mill products as follows: "Straight grades at $3.10, $3.20, $3.30; patents at $3.40; 80% patents $3.50 per barrel f.o.b. for Lower Provinces. Bran and shorts in good demand and apparently scarce." Oatmeals are in good demand; Gold Dust $3.20 per barrel.

Montreal: Prices are fairly steady. We quote: Spring patent $4.25 to $4.50; winter patent $4 to $4.25; straight roller $3.55 to $3.75; extra $3.20 to $3.25; superfine $2.65 to $2.90; city strong bakers $4.10; Manitoba bakers $3.90 to $4. Oatmeal: Granulated, brls., $4 to $4.10; rolled oats, brls., $4 to $4.10; standard, brls. $.390 to $4.00; granulated, bags, $2 to $2.05; rolled oats, bags, $1.95 to $2; standard, bags, $1.90 to $2.

Manitoba: Prices are locally: Patents $1.95 to $2; strong bakers $1.75, $1.80; XXXX 75 to 95c.; superfine 60 to 70c. Bran $8 to $9 per ton; shorts $10 to $11.

WHEAT AT PRIMARY MARKETS.

The following table, compiled by the Cincinnati Price Current, gives the receipts of wheat at the points named for the 32 weeks ended Jan. 28, with comparisons:

SPRING WHEAT.

	1892-3. bus.	1891-2. bus.	1890-1. bus.
Chicago	47,325,000	39,711,000	10,572,000
Milwaukee	10,299,000	8,151,000	4,976,000
Minneapolis	46,298,000	41,986,000	33,579,000
Duluth	33,706,000	35,849,000	12,052,000
Totals	137,628,000	126,697,000	61,179,000

WINTER WHEAT.

	1892-3. bus.	1891-2. bus.	1890-1. bus.
St. Louis	23,020,000	22,668,000	8,554,000
Toledo	20,401,000	17,962,000	4,444,000
Detroit	6,485,000	5,892,000	3,124,000
Kansas City	21,559,000	11,203,000	4,053,000
Cincinnati	1,451,000	1,836,000	757,000
Totals	72,916,000	59,561,000	20,932,000
Spring	137,628,000	126,691,000	61,179,000
Totals	210,544,000	185,258,000	82,111,000

It will be noticed that Cincinnati and Duluth are the only points not showing an increase in receipts over those of last year.

Office of the CANADIAN MILLER,
February 15, 1893.

THE GENERAL SURVEY.

A TORONTO newspaper, that decorates its commercial page daily with a cut of a bull and a bear constantly in conflict with one another, either being on top according to the condition of the wheat market of the day, has been obliged to make the bull play the 'under dog' the greater part of the past month. The market keeps decidedly bearish and despite the severity of the weather the bear has been able to keep out of doors and control affairs pretty generally ever since the first of the year. No one, of course, looks for any great measure of activity in the early part of the new year, but we do not know that it was expected that the situation should remain so thoroughly one sided for so long a time.

The situation abroad has continued heavy, and this fact has not helped the market on this side of the Atlantic. This too, despite the temporary brush that was given to May wheat by the bull element a few weeks ago. A bullish coloring has also been given the situation by the Chicago Economist, a paper that is credited with being usually careful in any commercial calculations it makes. The statement made is one that comes into sharp conflict with the bureau of statistics of the United States, and ends with the declaration that not more than 70,000,000 bushels of wheat will remain in farmers hands on March 1st. A fortnight of time will probably settle the question with more satisfaction than any speculation that we may enter into here, but it is to be observed en passant, as we had occasion to note in these columns a month ago, that statisticians are a good deal at sea, as to the actual amount of wheat that is being held in farmers' hands.

Looking ahead until July 1st Bradstreets makes the following calculation: "The indicated total quantity of wheat on hand January 1, 1893, is 287,000,000 bushels, from which we may subtract 170,000,000 bushels, as calculated requirements for food and seed for six months ending June 30, 1893, leaving 117,000,000 bushels for exports and reserves to July 1 next. Should our shipments abroad continue as heavy on the average as 3,000,000 bushels (flour included) each week, concerning which opinions vary, the current half-year would call for exports amounting to 78,000,000 bushels, and this subtracted from the 117,000,000 bushels point to 39,000,000 bushels as the indicated total of wheat reserves on July 1, 1893, which is about 4,000,000 bushels more than we carried over on July 1, 1891."

Interest is manifested in the foreign crops that have already been harvested and those which are under cover of the frosts and snows of the present winter. The reports that reach us are sufficiently conflicting to render it unsafe to prognosticate their likely influence on prices of the future. Patience is the virtue that must needs be exercised, albeit that some will assume to possess more wisdom than the rest of mankind and present a picture in their own colors of what the future will reveal.

CURRENT PRICES OF BREAD STUFFS.

WHEAT.—Toronto: Dull, weak and inactive, fall and red lying outside, said to have been obtainable at 67c.; and certainly to be had readily at 68c.; but no demand heard; spring nominal at about 62c.; goose at 60c. outside. Manitoba weak; No. 1 hard offered to arrive, at 87½c., with 84c. bid; No. 2 hard sold outside, at equal to 84c., Montreal freights. Montreal: Very little trade doing. Prices: No. 2 hard Manitoba wheat 82 to 84c.; No. 3 ditto 76 to 78c. Chicago: A despatch to John J. Dixon & Co., of Toronto, says: "The market for wheat again lower, ranging from 76⅜ to 76¾c., closing at the outside price with July about 1¼c. discount. At 76½c. there was for a time considerable support from the so-called clique brokers, but even that failed to prevent a weak closing. Outside news continues to be bearish. Exports this week were only 3,080,000 bushels; which is a million less than last week and the visible supply on Monday will probably show an increase. It looks now as if the extent of our stock of No. 2 wheat would be largely a matter of storage room. One concern is already arranging or rather building new cribs with a capacity of four million bushels that will be made "regular." and in case of an emergency plenty more room can be made. Weather reports from the winter wheat districts are all favourable." Current prices: May wheat 76½ to 76⅜c.; July 75⅜ to 75½c. St. Louis: Cash 67⅜c.; February 67⅜c.; May 71⅜ to 71½c.; July 72¼c. Duluth: No. 1 hard, May 73¾c.; July 75¾c.; No. 1 northern, May 70⅜c.; July 73c. Milwaukee: Cash 64¾c.; May, 68½c. Foreign: Beerbohm: Liverpool—Futures, wheat and maize, dull; red winter 5s. 9¼d. for March; 5s. 10¼d. for April; 5s. 11¾d. for May; 6s. 0¾d. for June; 6s. 0½d. for July. Paris: Wheat and flour, slow: flour, 47f. 90c. for February, was 48f.; 48f. 10c. for March was 48f. 20c. English country markets very slow, occasionally cheaper. English farmers deliveries of wheat for the past week, 53,447 qrs.; average price, 25s. 7d, was 26s. 3d.

BARLEY.—Toronto: Demand slack and prices unchanging; No. 2 lying outside sold at 40c. Buffalo: Dull and nominally unchanged. Quoted: State, 68 to 75c.; No. 2 Western, none offered; No. 3 extra, 71 to 72c.; No. 3, 60 to 65c.; No. 4, 53 to 58c.; Michigan, 60 to 66c.; Canada, No. 1, 83c.; No. 2, 77 to 78c.; No. 3 extra, 75c.

PEAS.—Toronto: Demand slow; holders asking 58c.; buyers offering 57c.

OATS.—Toronto: Quiet and irregular; worth about 32c. outside; mixed sold well at 32½c. and on spot at 34¼c.

RYE.—Toronto: Export, nil; for home use 55c. was paid east.

BUCKWHEAT.—Toronto: Scarce and in demand at 46c.

PRINCIPAL WHEAT CROPS OF 1892.

IT is now possible to compile a thoroughly reliable statement of the production of wheat in all the important countries, says the Corn Trade News. Official reports have been published of the twelve chief wheat-growing countries, and we produce the results in a tabular form, omitting all the minor countries and only showing what has actually been officially estimated. The crops of the southern hemisphere we omit altogether in the present table, as they come to maturity in the middle of the ordinary cereal season, and render comparisons difficult or misleading.

It will be noticed that many of the previous season's estimates have been revised for the second and third time, in the light of after-information. The remaining countries not included in the tabular statement grow about 10 per cent. of the world's total crop, as known to the trade. The totals of the three years now under review represent, therefore, 90 per cent. of the total product. Any variation in the yields of the unreported crops would not affect the grand total more than 1 or 2 per cent. We now give the crops of the twelve chief countries:

	1892 bushels.	1891 bushels.	1890 bushels.
United States	515,000,000	611,000,000	399,000,000
Russia and Poland	260,000,000	176,000,000	216,000,000
Ontario & Manitoba	43,000,000	56,000,000	37,000,000
France	312,000,000	212,000,000	328,000,000
India	216,000,000	275,000,000	226,000,000
Germany*	97,000,000	85,000,000	93,000,000
Austria	46,000,000	39,000,000	42,000,000
Hungary	134,000,000	135,000,000	150,000,000
United Kingdom	61,000,000	75,000,000	76,000,000
Italy	111,000,000	138,000,000	128,000,000
Spain	76,000,000	72,000,000	75,000,000
Roumania	58,000,000	56,000,000	72,000,000
Total	1,929,000,000	1,928,000,000	1,842,000,000

* Very unreliable statistics.

A GEOGRAPHICAL DON'T.

DON'T say that the compass points to the true north, for it doesn't, except in certain places. The compass points to the magnetic north, which at present is considerably west of the north pole. When Lieutenant Greeley was at Lady Franklin bay the declination of his needle was found to be very great, the needle pointing to the magnetic pole in a direction nearly southwest.

CANADA.

—At Methven, Man., twenty loaves of bread may be bought for $1.

—Roblin & Co. will build an elevator at Austin, Man., next summer.

—The Royal mill, of the Ogilvie Company, Montreal, Que., is to be increased to 2,000 bbls.

—A sorting elevator with a capacity of one million bushels will be erected at Winnipeg in the spring.

—Martin & Warnock, of Ottawa, Ont., are averaging shipments of two hundred barrels of flour daily.

—The grist mill at Young's Point, Ont., is in charge of Mr. Ed. Young; a nice business is being done.

—Shipments of grain to Quebec from the Northwest are reported quieter this month than during January.

—The McKay Milling Co, of Ottawa, Ont., are making large shipments of oatmeal daily to various points.

—The new mill at Edmonton, Man., is nearly ready for operation. The head miller will be Mr. Bell, of Regina.

—With a first-class miller in the person of Mr. G. Pearsol, the farmers' mill at Osprey, Man. is doing a large business.

—The farmers of Lumsden, Man., are considering the advisability of building a grist mill, there being none in the district.

—A grain exchange has been organized at Fort William, Ont., with Chas. Braithwaite, president and O. H. Cooper, secretary.

—Ed. Riddler, aged 23, was caught in the machinery of Ogilvie's elevator at Minnedosa, Man., on 1st inst., and instantly killed.

—British Columbia is sending 241 samples of grain for exhibition at the World's Fair, Chicago, and the Imperial Institute, London, Eng.

—A flour mill is being erected at Oxbow, Man., under the direction of Mr. Leech, who superintended the construction of the Killarney mill.

—A despatch from Winnipeg says that Geo. A. Thompson, leading grain merchant of Montreal, Que., has purchased several million bushels of Manitoba wheat.

—J. Spindloe, of Cookstown, Ont., has leased his mill to W. Farr. Mr. Spindloe has been in ill-health for some time past and is now retiring from active business.

—At a meeting of the Farmers' Elevator Co., of Indian Head, N.W.T., it was resolved to proceed at once with the building of Indian Head Farmers' elevator.

—The Ogilvie Milling Company, of Winnipeg, Man., have made a shipment of flour to the Royal Agricultural and Commercial Society, of British Guiana, South America.

—Fred. Fry, miller at John Asken & Son's mill, Leamington, Ont., received an ugly blow on the cheek a week ago, while changing one of the belts with a long pole.

—Port Stanley, several miles from St. Thomas, Ont., is considering the establishment of a 300-barrel flour mill. A stock company with a capital of $40,000 will be organized.

—37,000 bushels of grain have been delivered by farmers at Pilot Mound, Man., this season, and dealers expect that the quantity will be increased to 400,000 before the winter ends.

—The flour mill at Killarney, Man., is running night and day. Mr. Buck, an experienced miller, and one of the proprietors, is assisted by Mr. Tracy, a first-class miller from Ontario.

—Macdonald & Cameron are the proprietors of the new flour mill at Baldur, Man., on the Morris-Brandon branch of the Northern Pacific. The mill has been bonused to the extent of $3,000.

—The grain elevator at Alexandria, Ont., was burned down on the 4th inst. About 15,000 bushels of grain were stored in the building. Nothing was saved but the books and two desks, in saving which Mr. J. E. McGregor, the lessee, nearly lost his life.

—The North American Mill Building Co., of Stratford, Ont., are considering seriously the matter of erecting branch works at some point in Manitoba. The proposal is to erect buildings at a cost of $100,000, and employ about 70 men the year round.

—The farmers of Hamiota, Man., are petitioning the Local Government, protesting against certain restrictions that are held to by the Great Northwestern Central Ry. in the matter of handling grain through the Company's elevator. The railway is looking for further financial aid from the government and it is asked that this be refused unless they will remove the restrictions complained of.

—Senator Boulton, who has come out as an advocate of tariff reform, says the farmers of the Northwest realized last year only 13 cents a bushel on oats, while it cost them 20 cents a bushel to ship them via the C.P.R. to Montreal. Wheat, which sold at from 40 to 50 cents a bushel, cost 80 cents before it reached the markets in the east.

—In the autumn of 1887 Schmidt & Eidt began business as saw and grist millers at Mildmay, Ont. In the following July a fire destroyed about $20,000 worth of property, which they had insured for only $5,500. This crippled them very much and the firm dissolved. H. N. Schmidt then borrowed money from his father and expended $8,000 in rebuilding. Now he suspends payment on liabilities upward of $30,000. It is now proposed that the creditors form a joint stock company, putting in their claims as capital.

—On what is purported to be a Montreal telegram, President Van Horne is reported as saying a large company would doubtless erect an immense mill at Keewatin next season the same as the Lake of the Woods. The company might be induced to locate in Winnipeg, but he thought the water power would attract it to Keewatin. The C.P.R. was preparing plans for a large sorting elevator at Winnipeg with a capacity of about a million bushels to be erected on the company's track at Point Douglas. Construction will likely be commenced early in the spring so that the building will be ready for next season's crop.

—The result of the elections of the Toronto Board of Trade is as follows: President—D. R. Wilkie (acclamation.) First vice-president—Hugh Blain (acclamation.) Second vice-president—S. F. McKinnon. Treasurer—J. L. Spink (acclamation.) Council—William Christie, John I. Davidson, W. R. Brock, D. W. Alexander, H. N. Baird, W. D. Matthews, G. M. Bosworth, Arthur White, Michael McLaughlin, George H. Bertram, A. A. Allan, Warring Kennedy, William Ince, Robert Jaffray, Barlow Cumberland. Representatives on Harbor Commission—W. A. Geddes, J. T. Matthews. Board of Arbitration—Wm. Galbraith, J. H. G. Hagarty, J. D. Laidlaw, Thomas Flynn, R. J. Stark, R. S. Baird, R. C. Steele, John Earls, M. F. Brown, J. H. Sproule, Charles Pearson, S. Crane. Representatives on Industrial Exhibition—James Carruthers, M. F. Brown, W. B. Hamilton.

GENERAL.

—A Winter Wheat Millers' League has been organized at Indianapolis.

—Belgium imported 36,400,000 bushels of wheat in 1892, against 49,760,000 bushels in 1891.

—About half the lake carrying capacity in the Chicago harbor has been chartered for storage purposes.

—The stock of flour at Chicago Feb. 1st was 74,680 bbls., against 83,260 bbls. Jan. 1st, and 73,540 bbls. Feb. 1st, 1892.

—Italy imported, during the first five months of this crop year 14,480,000 bushels of wheat, against 4,944,000 bushels a year ago.

—The Harris roller mill at Trendale, a suburb of Minneapolis, was burned on the 4th inst. Loss, $120,000; insurance, $90,000.

—During 1892 the Duluth and Superior mills ground 1,422,213 barrels of flour, and the shipments from those ports footed 5,689,388 barrels.

—It is estimated that the Panama scandal in France has cost that nation 2,800,000,000 francs in the depreciation of French stocks and bonds since the trouble commenced.

—McManus, Farley & Co., grain buyers and elevator men, in Crookston, Minn., are in financial difficulties. Liabilities are placed at $31,000, and assets nominally $41,000.

—The mills in St. Louis, Mo., in 1892 turned out 1,623,371 barrels of flour. Mills outside of St. Louis owned by St. Louis men ground 1,812,992 barrels. The total output of the St. Louis mill interest was 3,436,363 barrels.

—A flour trust has been formed. Most of the spring wheat millers in Buffalo, Chicago, St. Louis, Milwaukee, Minneapolis and tributary points have gone into the organization. The new list of prices will go into effect after the next harvest.

—Additional mills have been bought by the North Dakota Milling Association at Casselton, Cavalier and Melton, the combined capacity of which is 400 barrels per day. The association now has 32 mills under control, with a combined capacity of 3,500 barrels per day.

—Some newspaper man started the report that a Brookfield girl kneads bread with her gloves on. An exchange answers: "We also need bread with our shoes on, with our pants on and with all our clothes on. We need it badly, too, and if our delinquents do not soon pay up we will need it without any pants at all."

—"That's the fellow I'm laying for," remarked the hen as her owner came out with a pan of cornmeal.

—The coldest known location in the world is Verkoyansk, Siberia. The mean temperature at that point is only 48.6 below.

—It is proposed in St. Louis to pay salaries instead of fees to flour inspectors. Millers seem to favor this move if the Merchants' Exchange will reduce the inspection fee.

—A bill has been introduced in the Wisconsin legislature to induce the state of North Dakota to build and operate at Superior, Wis., a terminal elevator or elevators, to be owned and operated by the state for the use of its citizens to receive their grain.

—James Johnston, who has had charge of the Irwin malthouse and elevator at Greenbush, near Albany, N.Y., for 25 years, entered a bin to fix a defective grain chute. His foot slipped into the opening and the grain from above fell upon and buried him. When found life was extinct.

—The Nelson Milling Co., at Lishon, North Dakota, has lately shipped three carloads of flour direct to Hull, England, and gets, as claimed, five cents a barrel more than the receiving firm pays for any other American flour. The Lisbon mill is arranging also to ship its product direct to Norway.

—There are more rumors than ever afloat in Minneapolis as to the cutting of freight rates of flour eastward-bound. The general impression obtains that all-rail rates are being made that are as low as, if not lower, than rates across lake. The fact that the Burlington and Northwestern road, which connects with the Streator route, is carrying such a large proportion of the flour out of Minneapolis, causes general comment.

—The latest milling novelty is a new scalper, the invention of a well-known miller, of Leeds, Eng. It resembles an umbrella or flat cone (with point upwards), which revolves slowly enough for the feed—which falls on its centre—not to be thrown off by centrifugal force, on the one hand, or to drop off by too slow a speed on the other. The course of the meal is thus spiral on a wire-covered surface, the "throughs" passing the mesh, while the chop overtails at the edge of the umbrella or cone. This machine is an undeniable novelty in milling practice, and its progress will, no doubt, be watched with interest.

PERSONAL.

John Munroe, proprietor of the Globe Flouring Mill, Cornwall, Ont., died a fortnight ago. He was a native of Glengarry county.

—Mr. McCoy Clark, superintending miller for the Ogilvie Milling Company, has been on a visit to Minneapolis looking up new ideas as to milling.

Mr. Ralph Harndon, of Ross & Harndon, millers, Raglan, Ont., died on Jan. 18, aged 77. The deceased was one of the early settlers in Ontario County, a man imbued with a strong public spirit, and was an active participant in political and municipal affairs. He was a good speaker and his voice was frequently heard in the interests of good government and social and temperance reform.

The list of officers of the Toronto Board of Trade, given in our news columns, contain the name of J. L. Spink, treasurer, M. McLaughlin, a member of the Council, and Wm. Galbraith, on board of arbitration, all three creditable representatives of the milling industry, and among the chief officers of the Dominion Millers' Association. Besides these, prominent grain men, to wit H. N. Baird, W. D. Matthews, Thomas Flynn, R. J. Stark, J. H. Sproule, and Jas. Carruthers were also elected to important official positions.

TRANSPORTATION TOPICS.

The Grand Trunk Ry. has notified grain dealers that roads south of the Niagara frontier have refused to accept grain consigned to New York for export unless the same is consigned to a place or firm who will take delivery or arrange for furtherance.

—The Chignecto Ship Railway Company must raise the necessary funds to complete the project before the 1st of July next or the subsidy will expire. The directors have issued preference bonds upon the railway to the amount of £350,000, and hope to obtain the needed money by the sale of such bonds.

TRADE NOTES.

As will be noticed from advertisement in another column the Dubuque Turbine and Roller Mill Co., of Duhuque, Iowa, have arranged with John Inglis & Sons, Toronto, to handle the celebrated Hueffner corrugations in Canada, operated under Canadian patents. The same firm will also supply the Canadian trade with the necessary machines for their celebrated One-Break Milling system.

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The Canadian Miller will not knowingly publish the cards of irresponsible parties. So far as we know, the following firms are thoroughly reliable.

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MANITOBA WHEAT
Via C.P.R. and Northern Pacific.

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BRAN, SHORTS
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STRAIGHT GRADE FLOUR
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NEVER-FAILING WATER POWER. ROLLER process. Machinery all new. Capacity 125 barrels per day. Dam, Sluiceway and Flume in excellent repair. The only mill within twelve miles. A bargain may be had. Good reasons for selling. For further particulars apply

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FLOUR, GRAIN
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Send large samples and
quote prices . . . .
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ALWAYS BUYING. SEND SAMPLES AND QUOTATIONS.
Leon M. Garrier
COMMISSION MERCHANT
COR. ST. PAUL STREET AND BELL'S LANE, QUEBEC
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MINERAL WOOL
STEAM PIPE AND BOILER COVERING
Saves enough fuel to pay for itself in one season.
Is Fire-proof, Frost-proof, Vermin-proof and Indestructible
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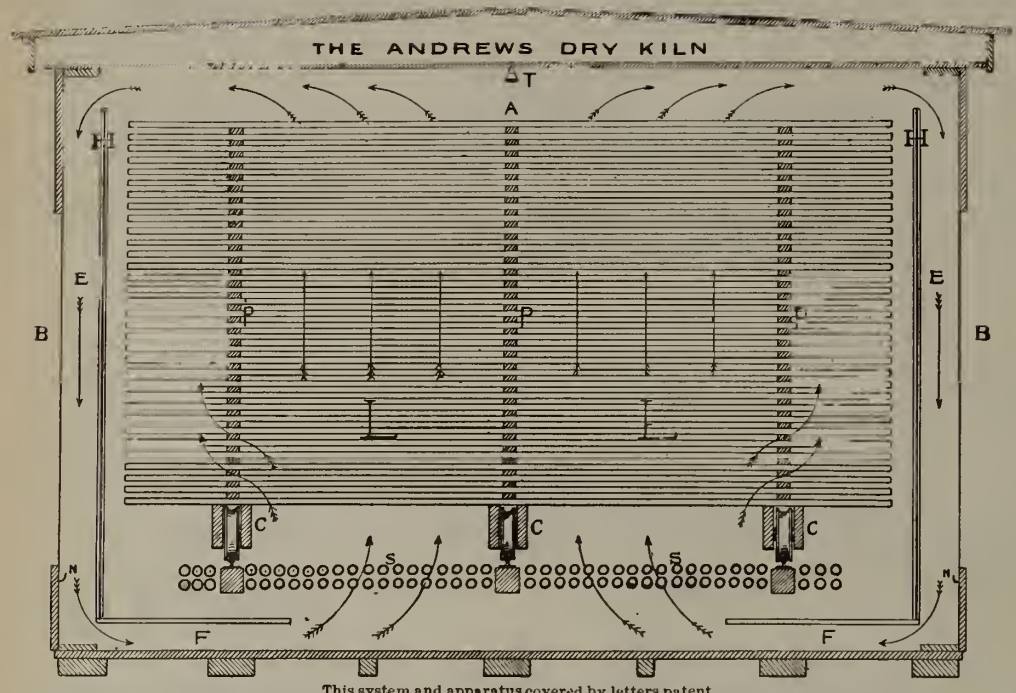
For Lumber, Lath, Shingles, Staves, etc.



This system and apparatus covered by letters patent.

A—Drying-Room. BB—Brass Condensing-Walls. CCC—Lumber Cars. EE—Down Air-Flues. FF—Bottom Air-Flue. HH—Inside Walls, protecting metal from heat. LL—Lumber on cars. NN—Brass Gutters for receiving condensed moisture. PPP—Sticks between lumber. SS—Double Steam-Coils. T—Automatic Steam Fire-Extinguishers. Arrows show direction of currents of air.

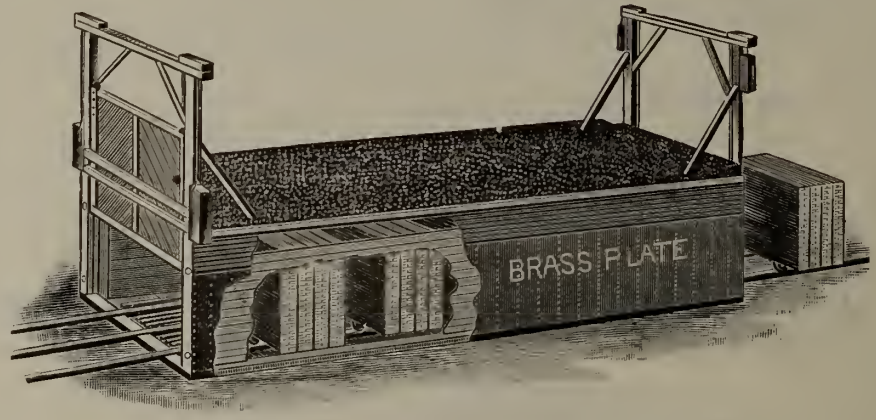
THIS DRYER

HAS PROVED TO PURCHASERS TO DO WHAT IS GUARANTEED IN SAVING THEM MONEY IN

Freight, Insurance, Time, Interest, Expense, Capital, Yard Room, Labor

There may be persons who do not appreciate the advantages of the artificial drying of lumber. But the shrewd men, in the manfacture of furniture and other woodwork where reputation would be sacrificed by a lack of proper material for good gluing and finishing, recognize a good system of drying as an important element of their success. High scientific authorities and thoroughly practical men are now agreed that the hot-blast and rapid-current systems ARE WASTEFUL, and that steam heat is the only safe means for artificial drying. The mode of applying steam heat most efficiently and economically is therefore now the essential point. The Andrews Dryer accomplishes this result more surely than any other known system.

NO FAN NO ENGINE
NO SMOKE NO CHIMNEY
NO SPECIAL FIREMAN OR FUEL
NO EXPENSIVE BRICKWORK
NO RISK OF FIRE
NO CHECKING OR WARPING
NO CASE-HARDENING
. . . . **NO EQUAL** . . . .



Outside View of the Andrews Progressive Kiln, showing Lumber placed crosswise the building, on cars.

"WE PUT GREEN SPRUCE IN DRIPPING WITH WATER, AND IN EIGHTEEN HOURS IT WAS DRYER THAN LUMBER THAT HAD BEEN STUCK UP IN THE YARD ALL SUMMER."

This is the verdict of a Quebec lumber firm, and we can give equal results every time.

The Andrews Lumber Dryer

Has been proved to possess the following points of excellence:

1st. That its drying is rapid and perfect.

2nd. That external and internal checking and discoloration are entirely avoided by this method.

3rd. That the drying is done by a CONTINUOUS system and the temperature of the kiln is under absolute control at all times.

4th. That our Dryer is free from the varying air currents (always wasteful) incident to all fan and open-draft kilns.

5th. That our drying is done by the slow continuous movement of a large body of slightly-moistened air.

6th. That our condensing surface is so very large as to be adequate to precipitating the moisture of the saturated air with the least amount of movement.

7th. That our piping is tested by high pressure and every outfit is fully guaranteed.

8th. That by our improved system of drainage the freezing of pipes becomes impossible.

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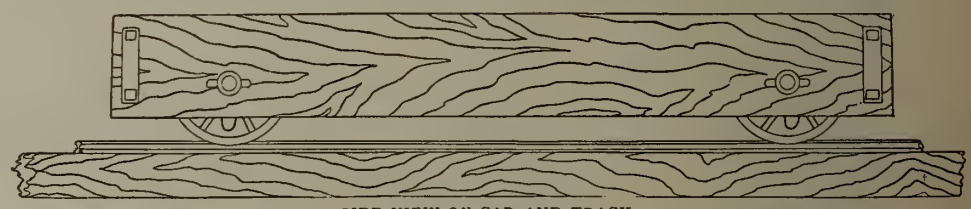
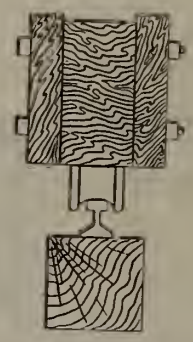
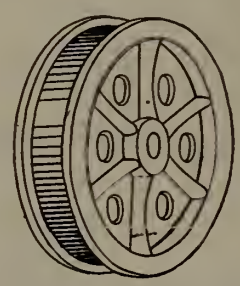


SIDE VIEW OF CAR AND TRACK.

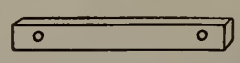


DOUBLE FLANGE WHEEL ON SINGLE TRACK

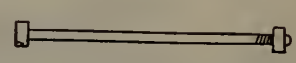


CAR WHEEL, DOUBLE FLANGE

SECTION OF CAR TRUCK, SHOWING AXLE BOX.



STRAP WASHER



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Royal Mills, capacity 1,800 bbls
City Mills, 1,100 bbls.
Glenora Mills, 1,200 bbls.
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7,100 BBLS.

HIGHEST QUALITY

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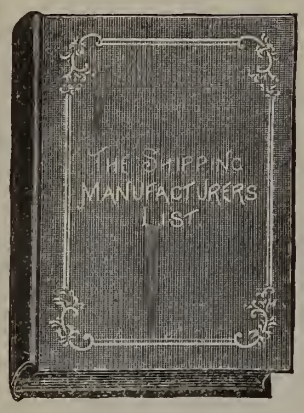

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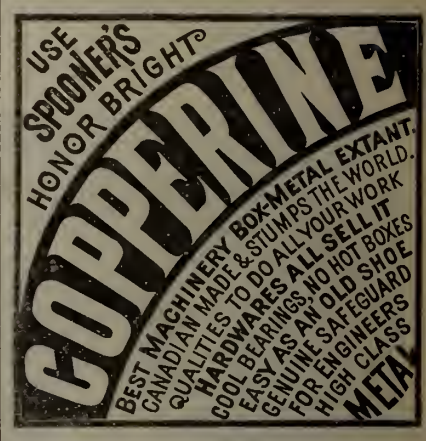

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who have the exclusive right to furnish this Corrugation under Canadian patents. A License must issue from us with each pair of Rolls. We have arranged with same parties to supply the Canadian trade with the necessary machines for

ONE-BREAK MILLING

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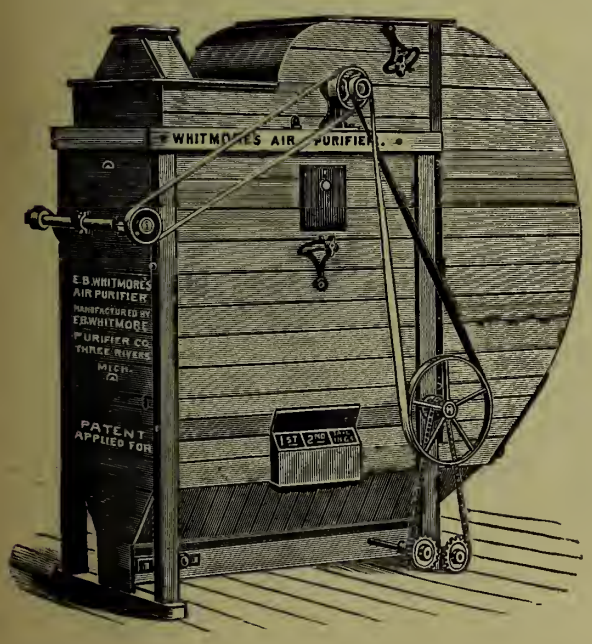

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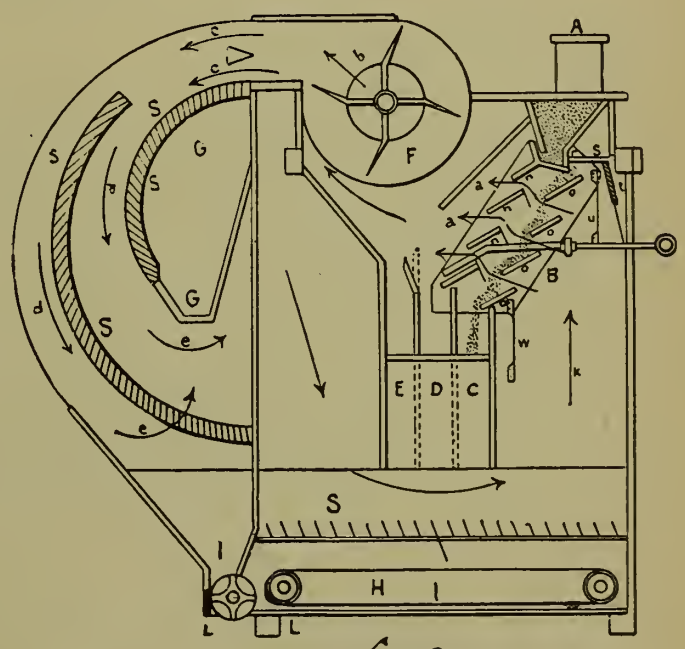

Fig. 2.

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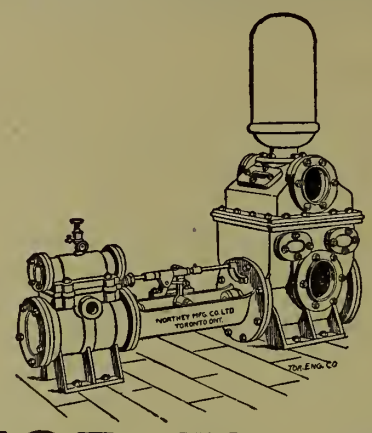

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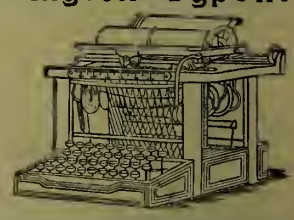

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW

W. J. KRAMER TORONTO

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OLD SERIES, VOL. XI. / NEW SERIES, VOL. III. } NUMBER 3. TORONTO, ONT., MARCH, 1893 { TERMS, $1,00 PER YEAR / SINGLE COPIES, 10 CENTS

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of superior quality and
GENERAL MILL FURNISHINGS
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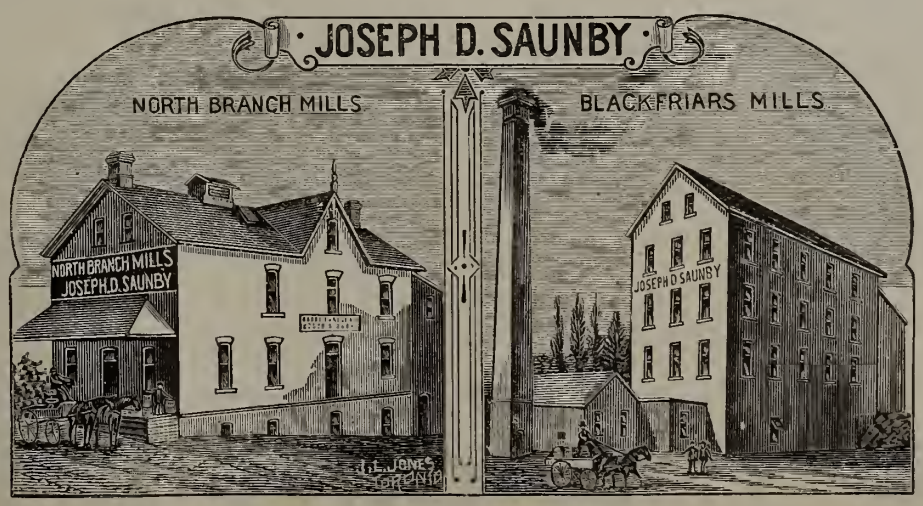
DANVILLE, Que.

NEW & 2ND MACHINERY
ILLUSTRATED CATALOGUE FREE
H. W. PETRIE
TORONTO, CANADA

JOSEPH D. SAUNBY



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Manufacturer of . . . .

. High Grade Flours

Brands :

"ANSONIA"
AND
"TECUMSEH"

Chopped Feed . . .

In whole or car lots mixed

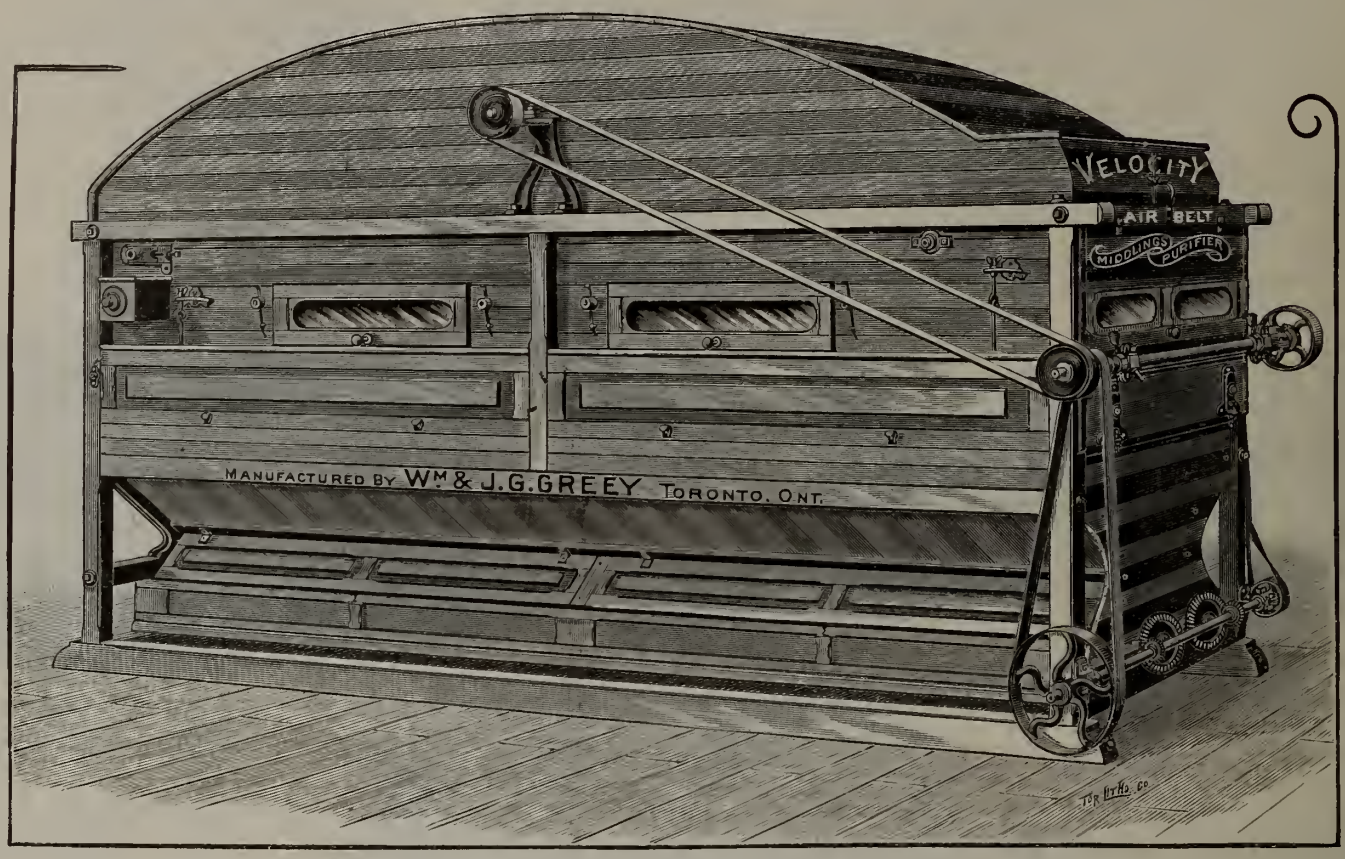
TWO FAVORITE
AIR BELT PURIFIERS

The Improved Velocity, with Sieve

Aspirator at head of Sieve.

Aspirator at tail of Sieve.

Transverse Brush.

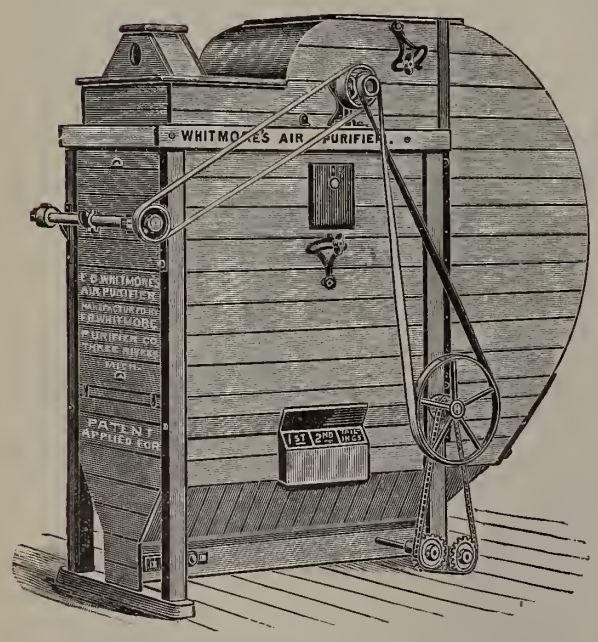


Valves regulating air currents all along Sieve.

Perfectly under control.

MADE IN SIX SIZES

The Whitmore, without Sieve



No Dust No Waste
Consequently
Larger Yields

Perfect Separations

Perfect Purification

Pure Middlings
Consequently Better
Flour

Made in Three Sizes

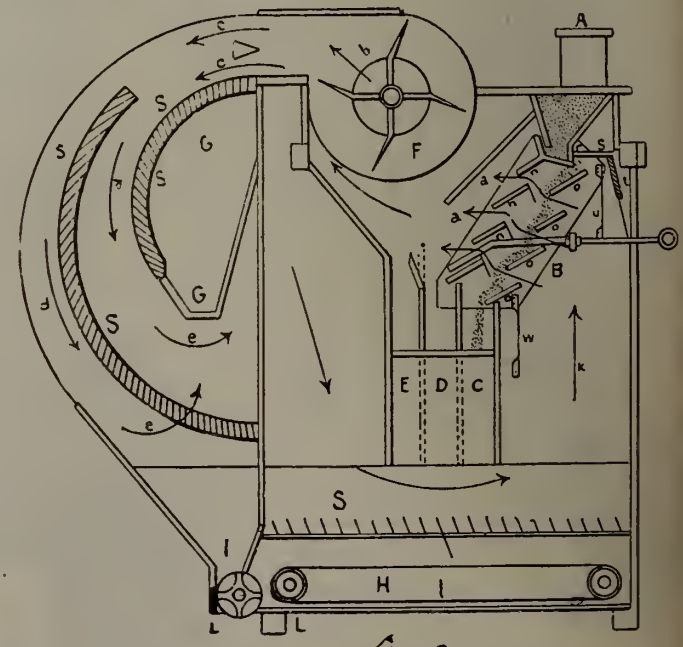


Fig. 2.

SOLE MANUFACTURERS FOR CANADA:

WM. & J. G. GREEY

2 CHURCH ST.
TORONTO

THE CANADIAN MILLER

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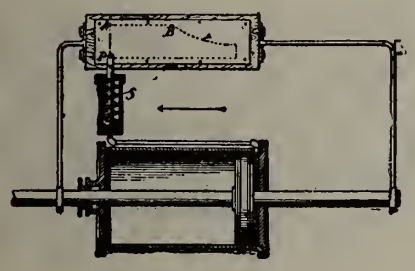
THE INDICATOR.

IN a reply to an inquiry from several of our readers as to the action of the "Indicator" as used on the steam engine, says the Northwestern Mechanic, we have prepared the following cut and explanation, hoping that thereby the principle may be shown: although it must not be thought that the instrument used is anything like the one here shown; this merely shows the principle. In the cut will be seen the cylinder of an engine, showing the sectional view, and the piston being at the right hand end of the stroke.

The piston rod is extended out of the cylinder each way in order to make clear that the board above moves with the piston, in fact in this case is moved by it.

The board is shown supported by the arms which run up from the piston rod, and on the board is a sheet of paper tacked on to receive the card or tracing of the pencil, which is held in the place marked P at the upper end of the rod in the cylinder. It will be seen that a small pipe runs from the right hand end of the cylinder to the small cylinder and there is free connection between the small cylinder and the main cylinder of the engine.



The Indicator.

The piston in the small cylinder is a neat working fit and is forced down by the spiral spring as shown at S. Now we will suppose that steam is admitted at the right end of the cylinder (the steam chest and valve being on the side in this case) and we see that the steam having free access to the small cylinder as well as the large one, will force the small piston up; and supposing this takes place before the piston of the engine has moved at all, the line that is drawn by the pencil will be perfectly straight as shown by the dotted line on the paper tacked to the board. Now that the piston has commenced to move, and the board moving with it, it will be seen that so long as the steam pressure in the cylinder (and indicator also) remains the same, the indicator pencil remains at the same height, and the line traced will be a perfectly straight line as from A to B. Now if we let the steam follow full stroke, the line will remain straight to the end of the stroke, but as this is not good practice, we cut off at half stroke. This means that when the engine piston has travelled half of its stroke the live steam is cut off, and the steam then in the cylinder expands, forcing the piston along but of course reducing the pressure as it advances.

As the pressure begins to fall, the spring in the indicator piston forces down the pencil arm, and remembering that the board is continually moving, we can readily see that the pencil will trace a curved line somewhat as shown. When the exhaust opens (we will suppose it to open and free the cylinder instantly) the pencil falls back to the original position, and on the back stroke traces a perfectly straight line. The dotted outline is called the card, and if we study it we can see that it represents the work the engine has done during the stroke, the height to which the pencil went as soon as steam was admitted, represents the pressure of steam in the cylinder at the beginning of the stroke. We also see that this pressure was maintained until the piston had made half its stroke, then the gradually falling line shows that the steam pressure was becoming less, owing to the volume of steam contained in the cylinder being expanded to twice its normal volume, and finally we see the pressure line drop, showing that the exhaust was opened and the free escape of steam allowed. Then we see that the height of the diagram represents the steam pressure, the point where it begins to fill represents the point of "cut off;" and the height before the final drop, the terminal pressure, or pressure still existing when the exhaust is opened and discharged it into the atmosphere.

These exact conditions do not exist in practice, but this will serve to show the manner in which they indicate the performance of the engine.

If we know the steam pressure as it is admitted to the cylinder, we can easily read the card intelligently, but if we do not, the card has much less meaning to us.

This is arranged in practice by having the springs "S," very nicely adjusted in the following manner. A spring is made that will be compressed exactly 1 inch with a pressure of 20 pounds, this is called a "number 20 spring," another is made that will be compressed exactly 1 inch with forty pounds, and called a "number forty spring" so that you can remember that the number of an indicator spring means the pressure required to compress it exactly 1 inch.

Now if we know that a forty springwas used in taking a card, and the card measures 2 inches in height, we know that the steam pressure, when admitted to the cylinder was exactly 80 pounds, and if the height of the line at the other end of the card is ¾ of an inch, we know that the terminal or exhaust pressure must be ¾ of 40 or 30 pounds. This makes the measurement of cards entirely practical if we but know the spring employed. Revising this operation we can see if we wish to indicate an engine whose boiler pressure is 90 pounds, and we do not want our card to exceed 2 inches in height, we use either 45 or 50 spring, usually the latter, as it is best to keep the cards reasonably small.

Of course with the primitive indicator as shown in our cut, we can only indicate the right hand of the engine, and would require two of this type to fully indicate the engine, but of the commercial kind in use to-day, it is possible to indicate both ends with the same instrument, by only changing the connection at the different ends of the cylinders. Now tracing the evolution from this crude indicator of ours to the finely finished one of the present day, we will see that the board as large as the cylinder is replaced by a very light cylinder or drum, and instead of taking the paper for the cards to a board, we simply fasten them around this drum. This drum is revolved at the proper time to be in unison with the engine piston, by being attached by means of a cord wound around the base of the drum, to some moving part of the engine, that gives the correct motion.

The movement of the piston in the instrument of to-day is usually multiplied by a very light arm carrying the pencil over the paper and otherwise being much more simple and compact than our crude instrument, but otherwise it might be called similar.

We will at some future time enlarge upon this subject, still in a very elementary way, for we believe that this is the part to be explained and that any who is desirous of learning in this any other branch has got the principle so that he can thoroughly understand it, he will need little further help in this way.

ANOTHER SIDE.

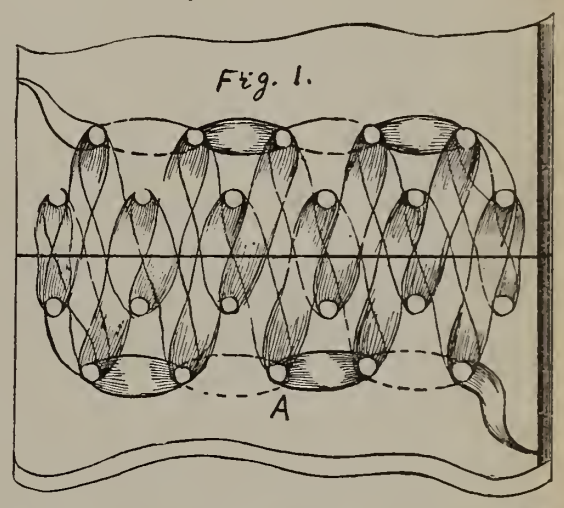
A TRADE contemporary says: "It is the fashion to boast of the benefits that have come to the race through the extension of transportation facilities all over the world. Who has reaped those benefits? Plainly, the producers have not been benefited. Large cities in all countries have got cheaper food through the extension of steamships and railroad lines, but the producers of that food have been forced lower and lower, until now the one indispensable, food, offers to its producers the smallest margin of profit of any industry on earth. The city communities thrive at the expense of the rural communities, and the latter may be pardoned for questioning the so-called benefits of the present situation."

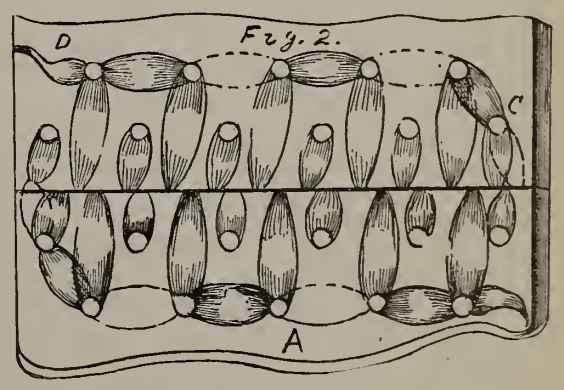
BELT LACING AGAIN.

By J. H. Miner.

THE following sketches show styles of lacing that I illustrated about four years ago. Some asserted that Fig. 1 could not be laced as per cut, and appear exactly alike on both sides, without crossing. My only way out of this was to mail a sample to all who were interested; the result was that my postage bill greatly increased for some time.

Fig. 2 illustrates the celebrated hinge lace, which every practical man ought to be conversant with. I have run this lace for four years on a line-shaft belt without replacing it. The cross stitch, A, was replaced several times, but the lace proper was not removed, as if it was not necessary.





This cross stitch will not make the lace any thicker, as it should be well hammered down after being put on the pulleys. If laced too "scattering," it does not last well. The best results are obtained by punching not over ⅝ apart, using a full ½-inch lace, and if the lace is very thin, and a small punch is used, ½ apart for the holes is better, drawing the lace as tight as possible at C. If the lace is drawn in twice through each outside hole, it will add greatly to the life of shifting belts, as it completely covers or incloses the outside edge or end of the belt.

Fig. 1 I termed the "puzzler" face. It is quite difficult to those not familiar with it. The hinge lace is superior to it for small pulleys; the only advantage of it is that it can be applied quicker. If the users of the hinge lace will adopt the cross stitch, they will be surprised at the result. In all cases I hammer the lace as flat as possible. Time will flatten it, but a nice smooth joint from the start is preferable.

COOPERAGE D'PT.

PRELIMINARY.

PURSUANT to announcement in the CANADIAN MILLER of last month, we now open a Cooperage department as a permanent feature of this journal. The growing importance of cooperage interests in Canada will make this department of value to a large circle of MILLER readers. A feature of the department, and one that will alone, no doubt, be highly prized by all interested in these trades, is the monthly review of trade conditions. No man can hope to succeed in business in these days of small margins in manufacturing and selling who does not keep himself in close touch with the market situation. Our sources of information are such that readers may place every dependence in the quotations made under that heading.

Readers can help to give interest to the department, and we shall always be glad to hear from them with information and suggestions bearing on cooperage affairs.

TRADE REVIEW.

The present winter has been exceptional for getting out all kinds of elm, basswood and other timbers suitable for the production of cooperage stock. We have had all through the timber belt good sleighing, which has enabled manufacturers of cooperage stock to put in full supplies of bolts, logs, etc. In many cases this year the manufacturers of cooperage stock have been compelled to pay higher prices for timber than they have done in former years, for the reason that the timber in immediate vicinity of mills has been cut off in previous years and bolts and logs have had to be hauled long distances. Many mills will run this year that will not be able to run or put in a supply for another season, as all the timber within available distance of their factories has been hauled in this winter, and on account of the shortage of stock carried over last season present prices are ruling high. Many of the milling concerns all over the country find considerable difficulty in being able to get dry staves and dry heading; patent hoops have also been scarce, and prices have been fully maintained. For later deliveries, however, this year it is anticipated that prices will not remain so strong.

The heavy demand for cooperage stock from Minneapolis and all parts of Minnesota at the present time is exceptional, very high figures are being offered for anything that can be shipped out of Canada, with the result that the Canadian market is left perfectly bare and manufacturers have great trouble in saving enough stock to take care of their regular trade.

The weather we have had has been very much against manufacturers of cooperage, the weather being too cold and stock that was carried over last year that was not jointed but shedded up, is not yet in condition to go forward for present use.

Heading has been exceptionally scarce with the result that mills in Ontario have found great trouble in being able to get sufficient to keep them going from week to week and in many cases small lots had to be shipped by local freight to prevent a complete shut down.

There has been a very good demand for patent hoops and all hoops manufactured have gone forward as quickly as made, in fact, to take care of the trade and fill orders coming in, hoops had to be shipped cut a week or ten days from the knife.

We have very little doubt that with the increased demand for cooperage stock all over the country, fairly good prices will rule during the year and that all mills will have a ready sale for their product, while possibly not at the high figures that have ruled in the past.

The following are present prices on cooperage stock in Ontario:

	Per net 1,000
No. 1 32" staves	$5 50
" 2 "	3 25
" 1 28½ and 30" staves	5 00
" 2 " "	3 00
" 1 24" staves	3 75
A No. 1 6ft. 9" patent coiled hoops	6 10
" 6ft. 6" " "	6 00
" 5ft. 6" " "	5 25
" 4ft. 4" " "	3 50
Headliners	35

	Per set
No. 1 20½" heading	6c.
" 19" "	5c.
" 18½" "	4¾c.
" 17⅛" "	4¼c.
" 16½" "	4c.
" 14½" "	3½c.

It is estimated on the present stock of logs taken out that the production of cooperage stock this year in Canada will exceed two hundred million staves, thirty-five million hoops and three and one-half million sets of heading, which, with racked hoops, liners, etc., will aggregate about $2,300,000 to $2,350,000. Of course, a very large quantity of staves manufactured in Canada is shipped into the United States, over one hundred million staves of Canada stock have been already placed on contract with United States concerns. The duty on hoops and heading, which is 35 per cent., makes it prohibitory for shipment into the United States and all of the hoops and heading produced in Canada are either used for Canadian trade or for export to foreign countries. A very large amount annually is exported.

SCARCITY OF STAVES.

What is suggested in our trade review of the heavy demand in Minneapolis for cooperage stocks is confirmed by the following from the Northwestern Miller of that city: "The cry of Minneapolis shops now is 'elm staves!' There probably is not a concern in the city that has not practically run out, or been forced to largely curtail its operations in order to avoid reaching that point. Everybody has had more than enough due on old orders or contracts, but the stuff has not materialized. The snow blockade has, no doubt, prevented the arrival of a good deal that was on the way, but coopers are outspoken in the conviction that dealers have neglected old orders and filled fresher ones for parties willing to pay higher prices for prompt delivery. In one instance one shop paid $7.80 to $7.85 per M. for five cars, but it had to have them at any price. Others whose cases were urgent, have paid somewhat above $7.25. But it is the common opinion that the present scarcity will very soon be relieved. Nearly all of the shops have a good deal of elm on the way, and, as soon as this begins to arrive, the shortage is expected, at least in a measure, to disappear. About all the shops are much better supplied with heading than with staves, and the season is getting so far advanced that factories are reported to be starting or increasing their production. There is, however, no surplus available, and it would be hard to go on the market and buy much. Quotations are as difficult to give as ever. To buy on the market for quick delivery, it would probably be necessary to pay over 5c. per set. Oak staves are easy, being quotable at 13½ to 14c. per set. Some shops are still on the lookout for a limited number of shaved hoops with which to round out their season's supply, but dealers have stopped cutting and no great quantity is available. On this account, it is barely possible that one big concern here, at least, will feel constrained to make the mugwump barrel, the same as is already done by two other companies. This barrel is hooped at the bilge with patent hoops and on the ends with round hoops. The Pillsbury company is using this barrel exclusively for its highest grade of flour."

CHICAGO MARKET.

The Lumberman, of Chicago, of current date, says: The demand for pork barrels and lard tierces is dull and light, owing to the meagre receipt of hogs and the dull state of the market for hog products. Tierces are selling at 82½ to 85 cents, and barrels at 67½ to 70 cents. The demand for flour and whiskey barrels is fair. Coopers' stock in general is in moderate request, commission men feeling averse to urge shipment of supplies to the market in the present state of demand. The trade is depressed by the unsettled state of the speculative markets.

The mills of the Detroit Hoop and Stave Company at Wyandotte, Mich., began the season's work March 10. The company has a license to manufacture the patent hoop grooved for wire.

VALUABLE REFERENCE BOOK.

READERS of the CANADIAN MILLER will be interested in the announcement made in our advertising pages of the intended publication of a Canadian Lumberman's Directory and index to the planing mills, sash and door factories, and stave and heading mills of Canada. Many enquiries have come to this office for such a work and to meet the call which we believe is general to the lumbermen of the Dominion, the publisher of the Canada Lumberman now undertakes its publication. Necessarily it envolves a large amount of labor and every possible care. Such a book can only properly serve its purpose by being correct and complete in every detail. Subscribers to the MILLER can lend substantial aid in this direction by forwarding to the publisher the information asked for in the announcement on page 15 of this month's MILLER. It is to be understood that the Directory will be much more than a directory of the names and nature of the business carried on by Canadian lumbermen, though this feature will hardly be too highly prized by the trade. The rules and regulations for the measurement and inspection of lumber at the leading lumber centres of Canada and those of the United States where Canadian lumbermen do business, will be embodied in the work, together with information of a practical and useful character to lumbermen and wood-workers not obtainable in collected form in any other book.

BOLTING CLOTH CLEANER.

A CLEANER for the cloths and round reels as shown in the cut given herewith is described as follows by a writer in the American Miller: The letters A A show a

square piece of pine wood perfectly straight, about 1½ inches square; B B are gudgeons on which the cleaner revolves; C is the driving pulley. Cut out of soft pliable sheepskin pieces 1 x 3 or 4 inches and nail them with small tacks on the pine shaft so that the strap marked E will strike the cloth in the same place as F, so that in every revolution the cleaner makes it will tap the bolt twice gently. It may easily be driven from the reel shaft.

When putting the straps on start say at E which comes out on one end of shaft; then you leave a space of one inch between this and the next one for the strap D, and so on; and, as I know by experience, you will get a cleaner that cannot be beaten, by brushes. cloth or even a broom, which latter instrument is sometimes used as a cloth cleaner. The same device can be adapted to a purifier.

SAVE THE MILLER'S STEPS.

THE placing of a convenient passenger elevator in large mills can not be too strongly commended. A person who never took the pains to figure up the distance would be astonished at the number of miles an operative miller will cover in a 12-hour track. Especially is this the case in mills of medium capacity where one man has charge of all the machinery. Aside from the question of convenience and comfort for the operators, the result would undoubtedly be a saving on the score of economy. Machinery would be more closely attended, choaks less frequent and the results of the entire mill bettered by reason of closer adjustments.

ORIGIN OF WINDMILLS.

WINDMILLS are of great antiquity, and are stated to be of Roman or Saracen invention. They are said to have been originally introduced into Europe by the Knights of St. John, who took the hint from what they had seen in the crusades. Windmills were first known in Spain, France and Germany in 1299.

FROM an envelope that has been placed in my hand one might be led to suppose that the old mother England was preparing to let her young child Canada cut away from her leading strings. The envelope was the covering of a letter received from a publishing house in London, Eng., and s addressed: "The Canadian Miller, 46 King St. West, Toronto, Canada, U.S.A." Let me say to our English friend that we have not got there yet, nor are we a bit anxious. The people of the U.S.A. (United States of America)—the parenthesis part for the information of the British correspondent—are very nice folk, and taking them altogether we think a good deal of them, but when it is a question of seeking more intimate relationship, Miss Canada is not in the matrimonial market. Canadians are Britishers, and our love, attachment and loyalty are true to the old flag and the old mother."

* * * *

A local broker expressed himself thus on 'Change a day or two ago: "There is very little trading for local operators on the Chicago market the past few days, and if the market does not get into better shape soon the prospects are that there will be little done this month. The market is lifeless, and any movement of the bulls fails to have the effect of causing a boom market. The bears have the best of it just now, and I think that they will control the wheat market for some time to come."

* * * *

Mr. James E. Steen, of the Winnipeg Commercial, who has been visiting Montreal and other eastern parts, speaks hopefully regarding the business prospects of the prairie province. "I believe," said Mr. Steen, "that this year will see the largest area under wheat ever known in the history of the province. There has never been so much ploughing as was the case last fall. In 1891 there were about 960,000 acres under wheat in the province of Manitoba. The year following it decreased to 890,000 acres, but as last fall was such a good one I have no hesitation in saying that the acreage of wheat this year will be 1,250,000, and if you include all grains the figures will reach one and three-quarter millions. The population is constantly increasing all over, and there is, no doubt, a half million acres in all grains beyond the limits of the province."

* * * *

"A flour factor of considerable experience," says the London (Eng.) Miller, "remarked not long ago that London millers were to a great extent responsible for the heavy importations of American flour. He held that the British flour manufacturer showed an excess of good nature in giving such liberal credit, while his American competitor invariably exacted payment for his goods within a fortnight of their arrival in port. There is no doubt that many millers, especially in this district, are at times over-liberal with their credit. It is more than eight years since, at a dinner of the London Flour Millers' Association, Mr. Richard J. Duck observed 'that English millers should take a lesson from the foreign importer, who requires payment within a fortnight of delivery . . . no London miller receives an equally prompt payment of his flour . . . it is therefore clear that the millers give their customers the use of their own money, wherewith to buy the goods of their foreign competitors.' Those words are as true to-day as ever."

* * * *

A short time since information came into my possession from a well-known and highly esteemed miller who, whilst interested in the prosperity of milling and grain operations in Ontario, has a more direct interest, probably, in the success of Manitoba and Northwest affairs. It was this fact that gave special significance to what he told me. He had been referring to the heavy rains that visited Manitoba last October—a rain-fall quite unusual for that country. "When these big rain storms came," said he, "not more than one-half of the wheat was threshed. The greater part of the unthreshed wheat, owing to careless stacking, was more or less damp, some of it wet; this was nearly all marketed during the hard, frosty weather. To an inexperienced buyer it was not detected, but if detected and bought at a few cents below the sound wheat price it was in many instances put with the sound wheat. When you remember that a great proportion of the wheat buyers are inexperienced and do not realize the amount of injury such grading will do, you will have some idea of the consequences when the hot weather comes on. Last year it was only the inferior grades that were affected. This year I fear the whole range of grades will be in trouble."

* * * *

A sixteenth century donation was recently in France the cause of a curious lawsuit. In the year 1634 the famous soldier, Marshsal Boufflers, undertook on behalf of himself, his heirs or the occupiers of his mansion at Crillon, to give three measures of corn (the capacity is not stated) to the village clerk in return for certain teaching to be imparted by that functionary to the children of the parish. This instruction was to consist of the catechism and of a hymn, "Qui Lazarum," to be chanted by the choir in the chapel of Crillon in memory of the donor's wife. The Marshal's mansion, after passing through many different hands, is now the property of the Duc de Levis-Mirepoix. This nobleman lately discontinued the tribute of corn on the not unreasonable ground that the municipality no longer fulfilled its share of the contract, the parish clerk having been replaced by a lay teacher, who taught the children neither hymns nor catechism. Thereupon the Mayor of Crillon sued the proprietor of the mansion for the donation, and gained the day, though it is not said in what kind of a court. The tribunal held that the present owner of Crillon, not being of the blood of Marshall Boufflers, had no power to cancel the gift. Seeing that the municipality had repudiated its own part of what was virtually a contract, this decision is surely hard measure to the defendant.

* * * *

A single sentence in a letter received from Mr. Jos. W. Warder, of Bobcaygeon, Ont., when remitting his subscription account to the publisher, has occurred to me as very sententious and practical. It is this: "Would like to see Canadian millers discuss subjects of interest in milling similar to Americans." I can say with the Hoosier poet, Will Carlton: "Dem are my sentiments, too." I have hammered on this text, I was going to say, for ages. But if I put it in that way, you would guess my years, and though I am not a woman, I might rather that you knew less of my personal affairs. All the same, I have done some years of tall talking on the question. We have a splendid lot of Canadian millers—bright, intelligent, sensible, practical men. They know their business. No one knows it better. They are as full of ideas, to use a very aged simile, as an egg is full of meat. But they are the hardest men in this world to get started on giving out of their knowledge. I would almost recommend them to read a short article, which appears in another part of the MILLER, on "Powers of Absorption." You remember a wise saying of the Autocrat of the Breakfast Table that I once quoted on this page: "What would be the state of the highways of life if we did not drive our 'thought sprinklers' through them with the valves open sometimes." I would be ready to say a good deal more, if Canadian dusties might only be influenced to open their mouths, and, pen in hand, transmit their thoughts to paper and forward them to the CANADIAN MILLER that others might be benefitted. I need say no more, but I will hope that Mr. Warder's hint may not fall on stony ground.

* * * *

An article in the February MILLER on the "Origin of Fife Wheat" has brought me several letters on the question. Mr. G. Leith, of the Nileston Mills, London, Ont., says: "I came from Aberdeen, Scotland, in 1841, locating then in the township of Hellen, Prince Edward Co. The same year an emigrant came from Scotland, and brought a bag of spring wheat. This was disposed of to some farmers, who sowed the wheat, and in 1842 I ground the product. When the farmer brought the grist to the mill I asked him what kind of wheat he called it. I was told it was Fife wheat. It was a hard, flinty wheat, and difficult to grind. I used to sprinkle the wheat with water and let it lie in a heap for two days. What I claim is that the Fife wheat of Manitoba is none other than this Fife wheat of Scotland, some of which was grown in Prince Edward Co. as early as 1841. The Leith family have been oatmeal millers and millwrights in Scotland some hundreds of years, so my grandfather told me sixty years ago." The earliest date hitherto given of the introduction of Fife wheat into Canada or the United States has been 1856 and 1857. Mr. Leith's story antidates the period some sixteen years, and ought to be sufficient evidence to the Buffalo Milling World that Fife wheat had its origin in Canada and not the States, so far as this continent is concerned. An old and esteemed correspondent, who resided for many years in Peterboro county says: "In 1853 the writer lived in the township of Otonabee, Co. of Peterboro. My father was running a mill then and knew Mr. David Fife. He bought his wheat, or it was sent to him from Scotland and for years it was known as Scotch wheat. We had great difficulty grinding it owing to its hardness, and under the old process the bran cut up. Club wheat was thus preferred to it until the purifiers and rolls came in. By this time it had spread over the whole of the northern part of this continent under the name of Fife." All accounts of this wheat seem to agree as regards its extreme hardness.

* * * *

Everyone, I suppose, has experienced in one way or another how far out an apparently cleverly-constructed theory may be when put to the test of actual practice. Things do not then dovetail in as snugly as they seemed to do when the theory had got no further than an elaboration on paper. A correspondent of the Modern Miller seems to have had this thought in mind when he remarked: "Often I wonder what becomes of millers who accept as gospel all the advice recognized technical writers have to offer them in the milling journals of this and other countries. Judging from what I am told, it is not an uncommon thing for millers to gain valuable ideas from the technical writers and not much more uncommon for them to be misled by the same agency. At a glance it would seem that writers should be more careful and avoid giving publicity to any plan or idea that might bring injury to the fortunes of any one adopting it. A second inquiry discloses the fact that it is not possible to advance an idea beneficial to every one even in the same trade. The reasons why this is and should be so are many, but one is sufficient to make it apparent to all in this connection. A writer may know a great deal about milling in two, three, five or many more states and in addition may have had experience in other countries and still be ignorant of the peculiar conditions prevailing in certain other sections of the country. This being true he can neither say that his advice holds good there nor that it does not—he doesn't know and doesn't say, leaving millers to use their own judgment in the application or rejection of his plans. This is as it should be. Millers should be able to know whether a milling system that will yield a profit in one section of the country is fit to adopt in another. They can not all know this in the start but they can learn it, and learning to rely upon their own judgment will do them good. It is not well to accept any rule as absolutely reliable without a test. It may be argued in some instances that no apparent loss or damage could result, but that is not good reasoning. A feature that is unimportant is not worth considering and all important matters should be investigated thoroughly before accepted, and as largely as possible before any expense is incurred. As a general thing the technical writers of to-day announce advanced ideas and are of inestimable value to the trade. They could, doubtless, be more explicit as a class, but it is impossible for them to so diagram and explain every new feature as to convey a practical knowledge to the miller who will not investigate for himself. If the average miller was as tireless as the average writer on milling subjects in seeking new and valuable ideas the business of milling would go forward with a whoop."

THE Canadian MILLER AND GRAIN TRADE REVIEW

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

A TALK WITH WORKING MILLERS.

ONE of the arguments sometimes used for a reduction in the hours of labor is that workingmen may have more time for self improvement and education. It is by no means certain that this spare time, if secured, would to any large extent, be used in this manner. The men who are to-day improving their opportunities, despite the hours given to manual occupation, would appreciate, and no doubt wisely use, these additional hours. The men who spend their time now in ways that are neither healthful nor improving from a moral or intellectual point of view would in many cases only extend the dissipation of valuable time as a result of extra time on their hands. This, however, opens an interesting field of labor discussion, that we shall not follow further at the present time.

This much will be agreed to by all thoughtful men, whether the end is accomplished in eight hours or ten hours, or under even less favorable circumstances, that the workingman who expects to attain success in his work must read and study at least on the lines of his particular vocation. If one is satisfied to drift with the tide and be a nobody among the multitude of nobodies in his calling, he need not trouble himself about books or opportunities for intellectual culture. The many enquiries, however, that come to a journal of the character of the MILLER, asking what books one may read with most profit to a working mechanic anxious to become a better mechanic, makes clear that there are scores of workingmen sincerely desirous of self-improvement. Nothing in the work of an editor gives him greater pleasure than the opportunity to answer such enquiries and perhaps give a word of counsel that will prove a stimulus and inspiration to some worthy seeker after knowledge.

Of course there are those ready with objections to suggestions such as we have here given expression to. But the lion and the adder are ever in the way of the man who does not want to do a thing. Some remarks on this point have recently appeared in the columns of the Roller Miller and we give them a place here as pat to the subject under discussion, and exceedingly practical: "With many of us, reading is largely a matter of opportunity; some think they lack the means of procuring books, or more frequently still, imagine that they have not the time necessary for the mastery of the helpful volumes. If one would stop to consider but for a moment, however, the amount of money we spend for cigars, amusements, etc., we would soon find that we could easily accumulate in a year's time a sufficient amount to be able to invest in a nice little library. But we are inclined to stop and consider that after working incessantly day after day we are entitled to a certain amount of amusement of some kind. This is very true, but we are liable to carry the matter too far. I do not mean to deprive oneself entirely of amusements, because it is easy to realize that "all work and no play makes Jack a dull boy." If we would, nevertheless, stop to consider the great benefit derived from a mechanical library, and the possible increase in salary by reason of intelligent use, or, at least, the being able to accomplish a day's work with a greater amount of ease, we would certainly profit by it far more in the end.

"It frequently happens that the taste or appreciation for what is advancing and ennobling in literature of this kind is lacking. This is the heaviest bolt on the gate of knowledge; for no amount of recommendation can give one interest in a book, and in mental as well as in physical food we are profited only by what we assimilate. But it is just for those who feel both longing and limitation that this article is written—simply to act as a finger-post indicating in what direction mental culture may be reached. Bear in mind also that there are "passing" books and "lasting" books. This we have more or less all of us experienced in books written in the form of romance, fiction, novels, etc. The same thing holds good on mechanical literature. One cannot expect to find the same amount of help in the books of the day as in the books for all time. Again, the manner of reading will differ. The one kind furnishes comparatively easy reading, because more on the level of our own knowledge and experience—but the latest book should not occupy the time to the exclusion of the older authors, who often give you their thought more by way of reward than of help, just as nature does not spread her gold upon the surface, but let's us search and dig, or crush the rock to get the precious ore. We must do some reading that requires thought and labor."

LADOGA WHEAT.

A RECENT Bulletin of the Department of Agriculture, Ottawa, deals exhaustively with the question of Ladoga wheat. Recognizing the necessity of securing the earliest varieties of grain to meet the climatic conditions of the Canadian North-West, samples of Ladoga were secured in 1887 from near Lake Ladoga, north of St. Petersburg, Russia, where the climatic conditions are supposed to be very similar to those of our North-West. This variety is said to be highly esteemed in Russia both for its quality and earliness. About one hundred bushels of the Russian Ladoga were secured and widely distributed in different parts of Manitoba and the North-west.

A thorough enquiry was entered into in order to obtain a correct judgment of the quality of this wheat. The most prominent among Dominion grain inspectors, the largest millers, and the Boards of Trade at Montreal, Toronto and Winnipeg were all consulted, and every precaution exercised to make the investigation complete and impartial. The opinions given on these samples were very varied. Some declared the wheat "hard," others "soft," a third "extra hard—opinions were decidedly conflicting.

The milling test was applied in 1888 when sixteen bushels of Ladoga, which had been grown at the Experimental Farm at Indian Head, were ground at the Qu'Appele mill with a similar quantity of Red Fife, which had been grown in an adjacent field. The flour of the Ladoga, when compared with the Red Fife was found to have a yellow shade. Several sacks of flour from both varieties were forwarded to Ottawa and bread carefully made from each under the supervision of Director Saunders of the Experimental Farm. The Ladoga was found to produce a drier flour than the Red Fife, and 100 lbs. of the Ladoga flour produced 2 pounds more of bread than the same quantity of the other. The bread made from both samples had a yellowish tint, but the yellow color was more pronounced in the bread made from the Ladoga flour. Two leading bakers in Ottawa also made tests from the same flours, and with the same result that the color from the Ladoga was not as good as from Red Fife.

Throughout 1889, 1890 and 1891 this wheat was put to various tests, all going to show that the quality of early ripening had been maintained throughout. That a more complete test of the milling qualities of Ladoga might be obtained, arrangements were made with M. McLaughlin & Co., of the Royal Dominion Mills, Toronto, to grind a car load of this wheat. Mr. McLaughlin's first report of the test was in these words: "Compared with Red Fife it grinds 'tough' reducing the capacity of the mill—thus the output per hour was:

Ladoga	16.3 barrels
Red Fife	18.1 "

These results, however, would not have been so adverse to Ladoga, if the mill were run with it, say for a week. The present trial was for nine hours only. The cleaning process or separation of bran is more difficult in the case of Ladoga, though in this respect as well as in the grinding it ranks ahead of goose wheat. It would yield about the same quantity of flour per bushel as No. 1 Hard, in which also the percentages of 'Bakers Strong' and Low grade are similar to those from No. 1 Hard. It contains about the same percentage of gluten as No. 1 Hard. The flour is yellow compared with that from No. 1 Hard. Doubtless the flour would give better results after being allowed to age."

Baking tests from the flour ground by McLaughlin & Co., were made by Mr. J. D. Nasmith. He is of the opinion that Ladoga is a strong flour, and that the yellow color may be dissipated to a great extent by allowing fermentation to proceed longer than usual. The sponge of Ladoga works quicker than that of Red Fife. In a comparative test Mr. Nasmith obtained from 100 lbs. of "Queen" flour 143 lbs. of bread; from 100 lbs. of "Ladoga" flour, 152 pounds of bread.

Later Mr. McLaughlin wrote as follows to Prof. Saunders at Ottawa: "We have now had sufficient experience of the Ladoga flour to satisfy us that it is never going to be a favorite with bakers. Nasmith has not been able to repeat the loaf he sent you, and Coleman condemns it in unstinted terms, a third man, B. Woodman, of Parkdale, to whom we sent some, had quite as bad experience as Coleman. Certainly the bread—all but that one sample of Nasmith's—was unfit for Toronto trade."

Ladoga has proven the subject of a fairly active discussion with agriculturalists, grain men and millers, in Canada and the North-West sections of the States for several years. But so far as Canada is concerned the investigation of Prof Saunders would appear to be fatal to the profitable growth of this wheat for milling purposes. It undoubtedly has the advantage over Red Fife of ripening ten days earlier, but it is condemned by the milling test. Mr. Saunders summarizes the situation in these terms: "From the facts submitted it would appear that while it is possible to make good bread from Ladoga flour it is much easier to make bread of an inferior quality, and unless the proper methods for treating this flour to procure uniformly good results could be ascertained it is not likely that Ladoga will be acceptable to either millers or bakers, as long as the flour of the Red Fife is obtainable. Hence when Red Fife can be ripened, the efforts of those settlers engaged in wheat growing in the North-West should be directed to its production in the greatest perfection by early sowing and a proper preparation of the soil. Give Red Fife every chance of maturing since no other wheat is yet to be had which will give the same satisfactory returns, both for home and foreign trade."

PURE SEED.

THE following resolution was carried by the grain section of the Toronto Board of Trade on the open board on 13th inst: The grain section of the Board of Trade desires to call the attention of the agricultural community to the necessity which exists for greater attention being given to the purity of seed used in the production of black-eyed and white-eyed marrowfat peas. Several markets which have heretofore bought Canadian marrowfat peas have not taken them this year on account of the inferior quality, caused by the mixture of black eyes with white eyes or mummy or other white peas. With restricted markets the price of the whole crop necessarily declines, and the trade can only be restored to its former position by the three kinds of peas, black eyes, white eyes and mummies, being each cultivated and marketed separately. The section would also urge upon the farmers the importance of thoroughly cleansing their fall and spring wheat seed by pickling or other process, so as to effectually destroy all smut germs, and thus avoid the great loss which has been occasioned in recent years by smutty wheat.

VIEWS AND INTERVIEWS.

An Ancient Scythe.

An Egyptian scythe, dug up on the banks of the Nile in 1890, and said to be as old as Moses, is exhibited among the antiquities in the private museum of Flinders Petrie, London. The shaft of the instrument is wood, set with a row of fine flint saws which are securely cemented in a groove. This discovery answers the oft-asked question, "How did the stone-age man harvest his crops?"

Business Use of Slang.

In business, and especially in trade advertisements and announcements, increased force, and the kind of force that sticks, will be given to the whole ad., sometimes, by the use of an expressive colloquialism, which is often only another term for slang. "Ah! yer trolley's off," contemptuously sneered a scrubby little newsboy on King street the other day to a companion with whom he was endeavoring to straighten out a difference of some kind; "and 'your trolley's off'," remarks a writer in a daily paper, "is getting to be pretty generally used to express what has been indicated by 'You're off your base.' If Macauley or Charles Lamb offers anything more terse or pithy that would express to every one just what every one understands by 'You're trolley's off,' it would be worth quoting. Slang is perhaps richer in the history that touches the life and experience of all the people closely than most other words. Future generations may know the exact date when the trolley was first used, but if they could discover just when 'Your trolley's off' came into vogue they would know better when electric trolley cars began to be in general use and common to the people."

Powers of Absorption.

The captains of ships which carry bricks, we are told, have to be very careful. An ordinary brick is capable of absorbing a pint of water. So with a cargo of brick in the hold serious leakage may quite well go on undetected, for the water that enters is sucked up as fast as it gets in. Where the danger comes from absorption by the brick is the possibility of the shipowner not knowing that the absorption has taken place and therefore, not being prepared soon enough to stop the leak. The power of absorption, if dangerous in some respects, has its strong points. The man who has the faculty of absorption, whether of means or knowledge, is building up strength. But if he does not give out to some extent that which he has absorbed, his strength will be a source of weakness and injury both to himself and others. It is the old story of the talents. Only those which are put to use add other talents to those already possessed. The talent that is tied in the napkin gains nothing and rebounds upon the owner. The sponge is useful in absorbing water only as it gives it out again for some useful purpose, to take in a fresh supply to be again made use of. We may wreck ourselves and wreck others, if like bricks in the ship hold, our policy is one of individual selfish absorption.

Hot Heads in Business Hats.

Many an important commercial transaction has been brought to an abrupt and unfortunate termination by a hasty word spoken. One writer has said: "A good temper is better than a legacy or a public pension." In the handling of the affairs of business there is hardly any calculating how far a persuasive and politic tongue counts. And the shrewd man of business is not unfrequently outwitted by his less capable rival simply because the one differs from the other in knowing how to keep his temper. Fred. Woodrow, in Age of Steel, has put the case in this way: "A business man with no bridle on his tongue or his temper, is as much out of place in commercial or industrial life as a mouse is in a street car, or a match in a powder house. No business can be run on hysterics and sulphur except that of a publisher of dime novels or a politician, or a demagogue on a platform or in a pulpit. Whoever heard of spasms in arithmetic, or of bile in percentages, or of a hot head in a business hat being the better for a stoker in his brain? It is true that bad tempered men often succeed in business, but in most cases it will be discovered that there is a cool head and a calm hand between the match and the straw. Anger is one thing, and irritability is another. No man can be blamed for making a protest against an employe who makes an easy chair of his work bench or a botch of his workmanship, or who boils over occasionally when imbecility demands a salary, but as a rule it serves its purpose best when wisely controlled and decently exhibited."

Cheapening Production.

As indicating the trend of the age it is doubtless true, as some one has said: "That never before has mechanical genius applied itself in this country as now to the solution of the question, how shall the cost of production be further decreased by the introduction of more efficient machinery? This is the keynote of the manufacturers who are now most successful. The search for specialties is not alluring, as specialty competes with specialty, and consumption is perforce limited. In staple articles, however, there is a constant trade. The manufacturer, therefore, who surpasses his fellows in the cheapness with which he can turn out staple articles of equal quality surpasses them also in securing a large share of the trade and better profits." Perhaps there is no use in kicking against the pricks, and necessity, the mother of invention, having driven trade to this resort, it will remain there until ejected by some more potent force. This force, it may be, will be the revulsion of sentiment that is already brewing, against the substitution of the imperfect, the nasty, the slip-shod, that in many cases is accompanying this cheapening of production. Or it may be a labor revulsion; for the demand of the consumer for cheapness and bargains in everything is forcing down prices of certain kinds of labor and the parent of the sweating system in many large cities is not the so-called sweater, but really the great mass of individual consumers, who insist on having cheap goods regardless of who suffers, even though it be their own neighbors and relatives. Perhaps the milling trades are as free from this class of methods as any commercial or manufacturing business. The average man will not, if he can in any way avoid it, sacrifice his stomach for that which is unpalatable and nauseous.

TWO BELTS BETTER THAN ONE.

ROLLER machines used in flour mills for reducing wheat are best driven with two belts instead of one as is much in vogue. So says a writer in the Mechanical News. They should be driven on both sides direct from the main driving shaft without the use of a counter-shaft. Neither belt should be crossed. Crossing belts is more or less a vicious practice at all times and under all circumstances, and should not, as a rule, be resorted to except under compulsion. However, cross-belts may be tolerated and endured in many places and for many purposes, but driving rolls with cross-belts is not among them. Very many use cross-belts on rolls as a matter of fact because they suppose it has to be done, knowing no way in which a cross-belt can be run open without reversing the motion.

It is just like standing an egg on end—simple enough if you know how. To open a cross-belt on a double stand of rolls requires two carrying pulleys, both of which can be used as tighteners, while doing away with the common tightners used on such mills. In all five pulleys are used for the open belt against four for the cross-belt. The best arrangement for carrying the extra pulleys is to procure four pieces of timber, say 4x6 when very long, and then 5x8, that will reach from basement floor to ceiling.

These timbers should be placed on the end, two of them on each side of the drafting pulley to allow for ample clearance, and securely fastened both at top and bottom. Journal boxes for the carrying pulleys, or rather adjustable tightening frames for supporting and moving the pulleys up and down, should be fastened to the posts near the floor, or at least far enough below the driving pulleys for belt clearance at all times. It will of course be understood that the four posts will be so arranged as to bring all the pulleys, drivers, machine pulleys and carrying pulleys in line in the ordinary way.

To get the belt on we start from the floor by passing the belt under one of the carrying pulleys, then up and over the machine pulley on that side, thence down and under the driving pulley and then up over the other machine pulley, thence down again and under the other carrying pulley from the outside, when the two ends of the belt will come together, then they can be fastened together and the job is completed. Care should be taken to run the carrying pulleys up to full height before fastening the belt. Each belt on a roller machine should drive one fast and one slow roll, as in that way the work is more effective and makes the strain equal on both belts.

It was a brilliant conception worthy the master minds engaged upon it and the labor bestowed upon it, and as a result we have the plansifter, a machine that is going to revolutionize backwards the process of flour bolting. A sifter no longer dexterously manipulated by the arm muscles of ye ancient housewives, but by water, steam, electricity, et. al., yet an ancient sifter in a new form all the same.

MILLERS, CENTRIFUGALS AND REELS.

IT is too much the disposition of millers, says a writer in the South-Western Miller, when flour issuing from a centrifugal or round reel is speck, and off-color, to put on a finer cloth. This is not a modern fallacy, it was prevalent in the days of the old style system of bolting, before centrifugals and round reels were in general use. But the plan, as a method of making flour purer, was made more popular and seemingly more effective by the introduction of centrifugal and round reel systems of bolting.

Observe: With the centrifugal or round reel a finer cloth may be employed than with a hexagonal reel and more granular flour produced, while more acute separations may be made and the stock better cleaned. But it must be remembered that perfect in operation as the best class of centrifugals and round reels are, they will not atone, in purification of flour, for imperfectly purified stock, either wheat or middlings, or improper grinding on either rolls or millstones; or, in other words, the centrifugal and round reel systems have accomplished nothing towards doing away with the scientific clothing of bolting reels or scientific milling on general principles. The operative must understand and fully appreciate, that because flour is specky, issuing from a reel making correct separations—according to the criterion of right percentages of products and desirably worked stock—that the reel is necessarily either imperfect or improperly clothed. For the fault may be with some operation prior to the reel.

While it may be said of the centrifugal or round reel that they are not easy of serious interruption by ordinary improprieties so far as execution in work is concerned, it must be remembered that to be a constant success and reliably durable it must be in the hands of skillful and attentive millers—and grinding operations should be as carefully performed as with the old hexagonal reel. For, among the advantages of the centrifugal or round reel over the hexagonal reel may be named, that as it employs all of the cloth, constantly in a uniform manner—the cloth will last much longer while turning out a certain amount of flour than if (as is the case with hexagonal reels) only a portion of the cloth is employed in passing the flour through its meshes. Reducing practices to a consideration of minimum effects it will not do to estimate that the wear on cloth is caused as much from passing soft stock through its meshes as from the resistence of material, thrown against the cloth by the action of the beaters, which will not pass through it. Hence it is plain that stock which has been properly ground—not consisting of a part of heavy, rough or sharp material—is easier on a centrifugal or round reel cloth than irregularly ground stock. And hence we say that material ground on a roller mill in proper condition by an understanding operative contributes fully as much to the centrifugal or round reel's successful operation as it ever did to the success of the hexagonal reel. And it does not only seem, but is a positive fact demonstrated in every-day milling, that no matter how perfect systems and machines may be made, the skillful, attentive operator is still a necessity.

Many a man in a cooper's shop has found that even a barrel hoop will turn if trodden on.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

FLOUR SHIPPING TO THE WEST INDIES.

CONTINUED interest is manifested in trade with the West Indies. The CANADIAN MILLER has published considerable on the question lately, but no more than the importance of this field to the Canadian miller warrants.

A recent visitor from these colonies is Mr. James E. Riley, of Montreal. As a business man he took occasion to make an investigation of business conditions in the Indies and has since given his views to the public. Complaint, he tells us, is made of the character of our flour packages. The barrels are flimsily made and cannot stand the rough handling they receive in the West Indian trade. We have on another occasion published similar testimony from other sources. Reform in the character of barrels used in this trade is quite essential, and as the matter has been plainly brought before Canadian millers, no doubt the requirements of the West India trade in this particular will be met.

Mr. Riley places some emphasis on the complaint that Canadian flour makes too white a bread. The people of the Indies have become accustomed to a dark loaf and in their view color and strength necessarily go together. Reform in this direction we may expect to find come from the people of the Indies. A little further use of the white loaf and a better knowledge of its constituent parts will show them its superiority over what custom only has made popular with them.

Some useful particulars regarding methods of handling flour are furnished in a letter from Delos J. Martin, of Autigua, W.I., which is on fyle in the Montreal Board of Trade rooms. "Flour," Mr. Martin says, "is sold for cash and on credit, 30 days or more. Duty is 84c. per barrel, and an additional tax of 96c. on every 10 barrels, 94c. per barrel, say. Government bonding warehouse charge for storing is 10c. per barrel for first month, and 5c. per barrel per month afterwards. Porterage is a small charge, 12c. per five barrels. I regret to say that Canadian flour is in disrepute among bakers here, owing to its making too white bread, the masses being accustomed to a darker bread made from American flour, which now brings a higher price (now $6 to $6.24.) It is also complained, I learn, by buyers of Canadian flour that barrels are not as closely made as American and contents escape."

J. Fleurot & Co., Pointe a Petre, Gaudaloupe, whose letter is also on fyle with the Montreal Board of Trade, writing on the flour question, say: "We are in good position to handle your consignments of flour; are already agents for several Canadian shippers, but up to now their goods have not given satisfaction. What we require here is something similar to New York city mills flours, principally the brands called Hungarian OO, and St. Lawrence, which are manufactured by Messrs. Jones & Co. If you could ship us similar goods, no doubt we could work up a good business for you. We advise you to ship one hundred barrels as a trial, and to ship round hoop barrels in preference to the flat hoop ones, which are not liked here; in fact, the former are preferred for packing coffee, cocoa, etc., for shipment to France, whilst the others cannot be sold for same purposes. We do not buy for our account; we receive on consignment. We can give you the best references. Flour is sold in notes payable at four months; we discount them at 6 per annum, and remit net proceeds of account sales in 90 days. Gaudaloupe bank bills on Paris at a cost of 2½ per cent. premium. No exchange on London or New York. Just now the article is in full supply and selling at 30 and 31 francs per barrel. We look for an improvement very shortly. The equivalent value of a dollar is 5f. 25c., that is 5 francs and 25 centimes."

THAT "GIGANTIC FLOUR TRUST."

There is enough general interest evinced in the subject of combines and trusts in the present day to cause the daily and weekly press to sensationalize any news in that line that may come in their way. We have seen an illustration of this within the past few weeks in the large headlines that have been given to a dispatch widely circulated in all parts of the continent announcing the formation by the spring wheat millers of the United States of a "Gigantic Flour Trust" which included ninety per cent. of the spring wheat millers and "all the large mills at Minneapolis, Duluth, Buffalo and Boston."

It is to be expected that no one would be more interested in a combine of this character than the millers themselves, but few millers in the localities mentioned appear to know anything about the matter. The meeting where the big combine was supposed to have had its inception was held in Chicago, but the most trustworthy reports from those interested in milling, and likely to know, shows that whilst a meeting of millers was held in Chicago, it was a very small meeting and carried no significance in the direction stated.

The leading milling journals of the United States with one voice ridicule the scheme as impracticable and chimerical in the extreme. Says the American Miller: "No miller need be told the utter uselessness of endeavoring to bring several thousand mills under one management or even into a close union. The most that could be done, perhaps the most that any one is sanguine enough to expect, is that a general agreement should be made not to sell flour below a certain price. And the minimum price would have to be pretty close to the cost of production if the agreement would hold, for millers within the combine, were one formed, as well as millers outside it, would be tempted to cut prices a little bit if the minimum price left even a fair degree of profit. So neither millers outside a combine nor consumers need fear the operations of any sort of combination that may be effected. Nor could any combination be made large enough and wide enough to raise prices to an offensive figure. There is too much milling capacity in this country for that."

The Buffalo Milling World says: "The number of mills in this country is estimated to be anywhere from 21,000 to 28,000. The production of flour in the country ranges probably from 70,000,000 to 78,000,000 barrels. If there are 21,000 mills they average only 3.333 barrels a year, or only 9 or 10 barrels a day, to grind 70.000,000 barrels of flour, and 3,714 barrels a year, or a little over 10 barrels a day, to grind 78,000,000 barrels of flour. If there are 28,000 mills they average only 2,500 barrels a year, or only 6 or 7 barrels a day, to grind 70,000,000 barrels, and 2,786 barrels a year, or 7 to 8 barrels a day, to grind 78,000,000 barrels of flour. All of these totals and averages are below the smallest capacities of the smallest mills in the United States. There are a few mills built to grind 15 barrels a day, a few to grind 25 barrels, many to grind 50 barrels, and the rest grind from that figure up to the highest figures of the few great plants. Now suppose a trust to be formed by springwheat millers, who run half the mills of the country, what would happen? The other half would simply have to increase their capacity from an average of 6 or 7 to 12 or 14 barrels a day to supply the demand for flour. Could it be done? Why not? At the present 6 or 7 barrel average output the plants run only 8 to 10 hours a day in many cases. All these plants would have to do to keep up to the demand would be to run 16 to 20 hours a day. If the winter-wheat mills attempted a trust the same thing would follow. If one mill shuts down or restricts, a score increase output. If 1,000 shut down or restrict, there are 20,000 others that will go on and increase their output. The truth is that there are too few great and too many small mills in the country to allow a trust to succeed." It might be a good thing for Canadian millers if such a trust were formed, but it is hardly likely that any relief in prices in the Dominion is to be looked for from this source.

TRANSPORTATION TOPICS.

Mr. S. A. Thompson, of Duluth, has a hobby that a fleet of largest lake steamers may leave Duluth, with a full cargo of grain and flour, and making its way through the chain of lakes to the Welland canal, the St. Lawrence, and out into the ocean, may land at Liverpool without breaking bulk. This in the opinion of the United States Miller is all in Mr. Thompson's mind's eye. "The ship canal scheme," our contemporary goes on to say, "is a piece of the same chimerical grandeur. By the time the ship canal between the lakes and tide water could be completed there would be no necessity for such a water way. If Mr. Thompson will take a look over the ground of his proposed canal and consider the Canadian route with all its drawbacks he will take a tumble to himself in great shape."

"I do not look for ocean rates to advance materially, nor do I think they will go much lower," was the way a well-known foreign freight agent sized up the situation. "You see," said he, "flour is only one of the various commodities that go to make up the tonnage of steamships, and when there is a deficiency in any one and nothing to take its place, rates are affected and made weaker. This year hogs are scarce, and the tonnage of provisions is greatly reduced. The tonnage of grain is also under the average. This has left a surplus of room, and, in steamship lines bidding for traffic, rates have gone down to a pretty low point, and since the cause is likely to remain through the season, it is hardly probable that a very much higher range will prevail."

THE FLOUR MARKET.

Weakness, rather than strength, has marked the flour market at home and abroad during the month. Wheat has been depressed and flour in sympathy with it has been dull. The output of the large mills of the United States, though below the average, has proven in excess of orders, and middlemen having blocks of flour booked are reported to be slow in giving shipping instructions. At the leading British centres—London, Liverpool and Glasgow—extreme dullness prevails. The demand is light enough to cause little or no alteration in quotations or values. Canadian markets maintain their share of the depression. Local trade holds, perhaps, an average, but nothing more. Export orders count very small. An improved demand exists for millstuffs, and this is the only strong feature of the market.

PRICES OF FLOUR AND MEALS.

Toronto: Car prices are: Flour (Toronto freights), Manitoba patents, $4.30 to $4.50; Manitoba strong bakers', $3.90 to $4.25; Ontario patents, $3.25 to $3.50; straight roller, $3 to $3.20; extra, $2.90 to $3; low grades, per bag, $1 to $1.25. Bran, $15.50 to $17. Shorts, $17 to $18. The Flour and Grain Trade Bulletin, of the Dominion Millers' Association, reports Ontario mill products as follows: Straight grades at $3.15 to $3.20; patents at $3.25 to $3.50; 85% patent, $3.65 per barrel, f.o.b. for Lower Provinces. Bran, $14 and $14.50; shorts, $15 and $15.75 per ton f.o.b. Bran and shorts in good demand, and scarce, especially bran.

Montreal: Patent spring, $4.20 to $4.35; patent winter, $4.15 to $4.30; straight roller, $3.55 to $3.70; extra, $3.15 to $3.25; superfine, $3.79 to $3.90; strong bakers', $4 to $4.15. Meal moves in small jobbing lots for retail trade requirements, at prices within the following range: Granulated and rolled, per barrel, $4 to $4.20; do. do. per bag, $2 to $2.05; standard, per barrel, $3.90 to $4; do. per bag, $1.95 to $2. The feed market is fairly firm under light stocks and good local demand.

Manitoba: Prices to the local trade in small lots per hundred pounds are: Patents, $1.95; strong bakers', $1.75; XXXX, 75 to 95c.; superfine, 60 to 70c. Bran, $8 to $9 per ton; shorts, $10 to $11. Meals—Rolled and granulated oatmeal held at $1.80 to $1.90 per sack, according to brand, and standard meal 5c. lower, these being prices to retail traders. Cornmeal $1.65 to $1.70 per 100 lbs. Split peas, $2.60 to $2.65 per 100 lbs. Beans, $1.75 to $1.90 per bushel. Pot barley, $2.50 per 100 lbs. Pearl barley, $4.

Office of the CANADIAN MILLER,
March 15, 1893.

THE GENERAL SURVEY.

HE would be a prophet of genuine prophetic build who would undertake to say with any measure of accuracy just what shape the wheat market is likely to assume in the near future. It seems all conjecture among even the wisest heads. Estimates that are made on what ought to be good authority are promptly broken to pieces by those who are supposed to possess equal authority for anything they may say.

Many have been waiting for the United States government report of March 10, which it was expected would give a pretty correct estimate of wheat in farmers' hands. This is now forthcoming and has had a disappointing influence on the bulls, whilst its bearish effect on the market has been quite apparent.

According to this report the estimated stocks of wheat in farmers' hands are 135,000,000 bushels, which is at least an even 35,000,000 bushels in excess of the highest estimate and nearly double the volume held in the estimate of those who take an opposite view. The estimate by the agricultural department at Washington of stocks in hands for the past eight years is given as follows:

	Bushels.	Per cent.	Price.
1893	135,000,000	26.2	76
1892	171,000,000	28.0	87⅜
1891	112,000,000	28.0	94
1890	156,000,000	31.9	77⅜
1889	112,000,000	27.0	$1.04½
1888	132,000,000	29.0	78⅛
1887	123,000,000	27.0	75
1886	107,000,000	30.1	80¼
1885	169,000,000	33.1	75⅛

Statistician Dodge, of Washington, who is held responsible for these figures, is being severely criticised in some circles and his figures challenged. This much at least is clear that the conviction has been growing for some time that there is a much larger quantity of wheat in farmers' hands than was supposed from many recent reports. And this conviction is having a depressing influence on prices. The Minneapolis Market Record has remarked on this point: "It is a very common notion that the stocks of wheat on the farms are small. That was a notion formed a month after the crop began to move, when it was declared the farms would be exhausted in a month more. It has been more than four months since then, and careful calculation leaves in the hands of farmers more than 25 per cent of the last crop, against 28 per cent of the former crop, at this time, as estimated at Washington. The same causes that make a large "visible" also make a large available warehouse supply and a large stock in farmers' hands. Commercial channels are choked with wheat, and much of the time wheat could scarcely be taken from farmers, for the reason that there was no place to put it. Instead of markets attracting farmers, the markets have repelled them."

Another uncertain element in any estimate of future prices is the condition of the winter wheat. It is feared that in some sections of the country less or more injury has occurred. But just to what extent is not known yet. March usually develops more trouble than February and until the month is well over we cannot say what this trouble will amount to. The most that can be done is to closely watch conditions and for the present no one need be greatly influenced by any sharp turn the market may take in one direction or the other. Any changes are likely to be of the day only and to be lacking altogether in permanency and real stability.

WHEAT.

An effort has been made by the Montreal Board of Trade to arrive at the quantity of wheat still remaining in Manitoba. Mr. George Olds, general traffic manager of the C.P.R., who has interested himself in the matter, says that there are somewhere near 3,500,000 bushels of wheat in the company's elevators at Fort William and about 400,000 bushels at Port Arthur, all of which will be moved as soon as navigation opens on the lakes. This view is confirmed by others, together with the statement that there are about 1,000,000 bushels of good wheat still in the hands of the farmers or in the elevators at the different points of storage along the line of the Canadian Pacific. From this it will be seen that there will be some 5,000,000 bushels of last season's crop to move eastward during the coming spring and early summer. The quantity at Fort William is much in excess of last year, owing to the fact that the demand was not heavy and people were willing to wait for cheap transportation. It is estimated that half of the quantity of grain now stored at Port Arthur and Fort William will come to Montreal and the lake ports of Ontario and the other half will be shipped to Buffalo. The Winnipeg Commercial of late date says: "Winnipeg inspection shows considerably under one-half what it was a year ago. Prices show a sagging tendency once more, and range from 48 to 54c. to farmers, in Manitoba country markets, for best samples of hard wheat. Stocks in store at Fort William, February 25, were 3,084,373 bushels, being an increase of 38,383 for the week." Toronto markets: White, 66c.; No. 2 spring, 61c.; Manitoban, No. 1 hard at North Bay, 84c.; No 2 hard, same point, 81c.; No. 1 frosted, 68c. Montreal: No. 2 hard Manitoba wheat, 83 to 84c.; No. 3 do, 76 to 78c. Chicago: March 73½c.; May 76⅜ to 76½c.; July 72⅞c. St. Louis: 63⅝c. for Cash; 66c. for May; 68⅞c. for July. British: Beerbohm says: Floating cargoes—Wheat, easier; No. 3 California wheat, off coast, 3d. lower. Mark Lane—Spot No. 2 Calcutta wheat, 3d. lower; present and following month, 3d. lower; Australian, off coast and present and following month, 3d. lower; Walla, off coast, 6d. lower; present and following month, 3d. lower. London—No. 1 California, prompt sail, unchanged; red winter, prompt steamer, 3d. lower; present and following month, 3d. lower. Liverpool—Spot wheat, very little demand; wheat all ½d. cheaper; flour, 6d. cheaper. On passage to United Kingdom—Wheat, 3,443,000 qrs. To Continent—Wheat, 805,000 qrs.

BARLEY.

The shipment of 100,000 bushels of barley to Russia is a compliment to Canadian barley that ought to possess significance to those interested in the production of this cereal. The shipper was Mr. A. Campbell, of Colborne and Toronto, who received the order from the Russian government, the barley to be used as seed by the poor farmers of Haugo, Finland, who lost all their barley crops last fall. The last lot of the order went forward during the past month.

Current demand for barley is fair. At Oswego Canada extra No. 2 is quoted at 79c.; No. 2 71c. New York: State 64 to 80c.; western 60 to 80c.; No. 2 Toronto 92 to 93c.; No. 2 84 to 85c. The Toronto market is fairly steady. No. 1 f.o.b. at a Lake Ontario port in May at 47c., and No. 2 eastward at 40c.

PEAS.

Toronto: Little demand and values weak. 56 to 57c. for cars lying outside.

OATS.

Toronto: Sales of white to arrive 35c.; white lying westward at 32 to 32½c. Buffalo: Good No. 2 white are wanted, and for the right weight buyers are willing to pay a premium; ordinary are slow, and mixed dull. Sales—4 cars No. 2 white, 39c.; 2 cars choice, 39½c.; 3 cars No. 3 white, 38c.; 1 car No. 2 mixed, 31½c.; 1 car choice, 35½c. Inspection; No. 2 white, 1; No. 3 white, 1; No. 2, 4; No. 3, 4.

RYE.

Toronto: Quiet; offering at 53c. Buffalo: No. 2 60c.; No. 3 55c.

BUCKWHEAT.

Toronto: Bought outside at 50c.

A Kingston despatch says: It is understood that if the trade demands the step a floating elevator will be placed at Prescott by the M. T. Co. to compete with Ogdensburg. Whether cargoes can be carried from the west to Montreal cheaper than via Kingston remains to be seen. There will be considerable risk in large vessels going down the river, which would affect insurance and in many cases pilots would have to be engaged.

NOTES AND NEWS.

William Watson, oatmeal miller, Mitchell, Ont., has assigned.

It is reported from Chicago that the condition of the new wheat crop in the western states is far from encouraging.

James & John Humphries have bought the mills at Allandale, Ont., and intend to put in a full roller process of fifty barrels capacity.

A joint stock company is being formed at Morris, Man., for the erection of a flouring mill. The farmers' institute of the locality is active in the matter.

The flour mill of W. H. Hill, Sarnia, Ont., was destroyed by fire a few nights ago. The building was a three-storey brick, and the loss suffered is about $7,000; fully covered by insurance.

The wall of our sanctum is just now prettily adorned with a handsome lithographed hanger in colors bearing the business announcement of R. C. Scott, proprietor of the Cumberland Mills, Highgate, Ont.

It is said that a "dusty March portends a plenteous season," while on the contrary, a "wet" March frequently proves disastrous to both wheat and rye. Hence the weather this month is watched with considerable interest.

According to the Adelaide Milling Co.'s calculations, the exports during the past calendar year from South Australia amounted to 432,000 sacks of flour and 180,000 qrs. of wheat, or a total of 540,000 qrs. expressed in wheat, of which only 110,000 qrs. came to Europe, the chief colonial customers being New South Wales, 86,000 qrs.; Queensland, 143,000 qrs.; South Africa, 120,000 qrs. Compared with this total of 540,000 qrs. for the exports of 1892, we have 1,120,000 qrs. in 1891 and 440,000 qrs. in 1890. The biggest exportation took place in the year 1884 and 1885, when 1,500,000 were shipped in each twelve months.

The step taken by the Dominion Millers' Association in securing a barrel of each of the most popular brands of flour used in the West Indies will be appreciated by all millers anxious for an extension of the export trade in Canadian flour. The barrels can be seen and samples of the flour secured on application to Secretary Watts at his office in the Board of Trade building. In the Mill Product page of this MILLER readers will find published some suggestions concerning shipping of flour from Canada to the West Indies that will be useful to those interested. This West India trade rightly belongs to Canada and can be made ours with a little care and management.

The approximate stocks of flour and wheat in Europe and afloat on March 1, says the Chicago Trade Bulletin, were equal to 86,000,000 bus., showing an increase of 1,100,000 bus. during February, and being 11,900,000 bus. less than reported on March 1, 1892. Stocks of flour and wheat in the United States and Canada on March 1 were equal to about 143,283,000 bus., against 149,223,300 bus. Feb. 2, and 86,604,000 bus. March 1, 1892. There has been quite a marked decrease in wheat supplies in the interior and at seaboard points, which has been partly offset by a large increase at Chicago. Supplies in the United States and Canada decreased equal to 5,940,300 bus., and the aggregate decrease in this country and Europe was equal to 4,840,000 bus.

MILL BUILDING IN CANADA.

Considerable activity is shown in the country at the present time in the remodelling of many well-established flour mills and the building of new mills. The Goldie & McCulloch Co., of Galt, Ont., have recently completed work on the mill of E. D. Tillson, of Tilsonburg, Ont., which, as reconstructed, possesses a capacity of from 250 to 300 barrels daily. They have also put in improved shape the 50-barrel mill of A. & S. E. Davidson, Jarvis, and Alonzo Birge, Eramosa, which is also 50 barrels capacity. This firm have in hand orders from James Goldie, Guelph, who will increase his mill to 800 barrels; R. C. Scott, Highgate, to be increased to 250 barrels, and R. Pincombe, Strathroy, who will enlarge to 150 barrels. They have also instructions from Rollins & Williams to build for them a 100 barrel mill at Exeter, Ont. The Ogilvie Milling Co., Winnipeg, have just had shipped to them from Galt, 6 Holt Purifiers. The record is not a bad one for the Goldie & McCulloch Co., and may fairly be taken as a compliment to the high character of work they perform.

DER VATER MILL.

By Chas. F. Adams.

I READTS aboudt dot vater mill dot runs der lifelong day,
Und how der vater don'd coom pack ven vonce id flows avay;
Und off der mill shtream dot glides on so beacefully und shtill,
But don'd vas putting in more vork on dot same water mill.
Der boet says, 'tvas bedder dot you holdt dis broverb fast,
"Der mill id don'd vould grind some more mit vater dot vas past."

Dot boem id vas peautiful to read aboudt; dot's so!
Budt eef dot vater vasn't how could dot mill veel go?
Und vhy make drouble mit dot mill, vhen id vas been inclined
To dake each obbordunity dot's given id to grind?
Und fler vater cooms along in quandidies so vast
Id lets some oder mill dake oup der vater dot vas past.

Dhen der boet shange der subject und she dells us vonce again:
"Der seeckle neffer more shall reap der yellow garnered grain."
Vellz vonce vas blendy, aind't id? Id vouldn't peen so nice
To hafe dot seeckle reaping oup der same grain ofer twice?
Why! vot's der use off cutting oup der grass dot vonce vas mown?
Id vas pest, mine moder dold me, to ledt vell enough alone.

"Der summer vinds refife no more leafs strewn o'er earth und main,"
Vell! who vants to refife dhem? Dhere vas blenty more again!
Der summer vinds dhey shtep righdt oup in goot dime to brepare
Dhose blants und trees for oder leafs; dhere soon vas creen vons dhere.
Shust bear dis adverb on your mindt, mine frendts, und holdt id fast,
Der new leafs don't vas been aroundt undill der oldt vas past.

Dhen neffer mind der leafs dots dead, der grain dots in der bin;
Dhey poth off dhem haf had dheir day, und shust vas gathered in.
Und neffer mindt der vater vhen id vonce goes droo der mill;
Id's vork ves done! Dhere's blendy more dot vaits ids blace to fill.
Let each von dake dis moral, vrom der king down to der peasant:
Don'd mindt der vater dot vas past, budt der vater dot vas present.

DEPENDS ON HIS MEMORY.

"Sir, can I occupy a few minutes of your valuable time in which to elucidate the——"

"Excuse me," said the careworn gentleman, looking up from a block of paper whereon he had been industriously figuring. "I am very busy this morning."

"But, sir, I feel convinced, more, I am absolutely positive, that the article to which I desire to call your attention, not necessarily with a view to purchasing, but rather to have you appreciate its merits, is something that will at once commend itself to one in your line of——"

"No, I——"

"Excuse me, here I have a chart which shows the exact course of the wheat market for the last five years. This line, as a gentleman of your keen faculties will readily perceive, marks the variations in the fluctuating cereal from time to time and enables you to see at a single glance just when the market was at its lowest and when it began to move upward. Besides these features this chart, which is published by subscription only, possesses——"

"You have a few left, have you? Shows the course of the market, hey? Well, my friend, you just roll 'em up and skip. Quick! Get! I don't want any old red-lined map to give me the course of the grain market for the last year. That dog's eared bank book's got red lines enough in it to show me all I want to know about the pestiferous thing and more too. You just move on. Fluctuations! Why, I'm a living chart of the wheat market myself, and don't you forget it; and I've got more lines around my eyes and under my bang than all the charts in your bundle. Run along, young feller! No black-coated canvasser can work me on that lay and I don't intend to hang a red-lined record of my mistakes on my office wall for flies to travel over. This is flat, net! c. i. f.! f. o. b.! scat!!"

Daily News, Truro, N.S.: Canadian millers should be proud of the CANADIAN MILLER. It is a well gotten up magazine and is calculated to be a great benefit to the milling fraternity and the grain dealers.

NOTES AND QUERIES

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column. Correspondents need not give their own name for publication, but it must be made known to the editor. Anonymous communications will find space in the waste basket.

No. 28. CAN'T DO IT.—Can you get up a good device which will automatically and instantly stop the engine and all moving parts connected therewith in case any one gets caught in the machinery?—Robert Grimshaw's Tips to Inventors. No, Robert, we can't; nor can anybody else.

No. 29. SETTING A SLIDE VALVE.—D. H. Welch, in Master Steam Fitter, says: Suppose you are called upon to adjust a slide valve on an upright engine 1/32-inch lead on top and 1/16-inch lead on bottom; after ascertaining by the usual means that the eccentric rod connection is the right length, adjust the valve so as to equalize the lead on both ends, then increase the lead 1/64-inch on the bottom, revolve the eccentric around on the shaft until you decrease the lead on the bottom to 1/16-inch; you will then find you have 1/32-inch on top. For instance, you have 1/8-inch on both ends; you increase the bottom 1/64-inch by lengthening the rod; you then have 9/64-inch lead on the bottom and have decreased the top to 7/64-inch. If you now revolve the eccentric on the shaft, away from the crank enough to decrease the lead on the bottom to 6/64-inch, you will find 2/64-inch or 1/32-inch on top and 1/16-inch on the bottom. If this rule is strictly adhered to it will simplify the setting of valves requiring more lead in the bottom than on the top.

No. 30. CONCERNING WEAK BOILERS.—A correspondent, X.Y.Z., takes no stock in the theory that old and weak boilers give way easily. This is risky doctrine—as risky as the weak boiler. If he wanted a bomb-shell that would explode with great violence he would not take the shell of an egg nor a scooped-out pumpkin-shell to serve as a covering for his dynamite; he would take the strongest material he could get, so that when the break should come it would come all at once. A few grains of powder in his gun-barrel behind a leaden ball makes a great explosion and may cause sad destruction: but he may hold the same amount of powder on the palm of his open hand and touch it off with a coal, producing only a s-w-i-s-h—and no damage at all. A weak boiler is like the famous buzz saw and the advice is applicable: "Don't fool with a buzz saw." Don't fool with a weak boiler.

No. 31. A FOAMING BOILER.—We would like very much to know the cause of a "foaming boiler," as we are nearly handicapped with ours. We have tried everything we can think of, such as "blowing off" the boiler, changing river water for well water, putting fat pork and potatoes in the boiler, but the last state seems worse than the first. Perhaps some of your subscribers can help us out of the difficulty. We should be everlastingly grateful to those who can name a cure for it.—T. & J. Gibson, Wroxeter, Ont.

No. 32. ECONOMY IN FUEL.—Could you or some of your subscribers who use steam for motive power give the writer some information about improvements in building in boilers with a view to economy of fuel. I understand there are several patents held for improved boiler settings, but do not know where to obtain information regarding them; also where any of them are in use successfully. This is a question which I presume a good many millers are interested in, and the information may be of general use to all.—G., Richmond, Ont.

MANITOBA LETTER.

[Special correspondence CANADIAN MILLER.]

SOME idea of the grain producing resources of Manitoba may be learned from the statistics collected of the elevators and flour-mills erected in Manitoba within the last decade. It may be that Mr. C. Wood Davis, the Kansas statistician, is not far out in his predictions that the Canadian Northwest territories will, within the next decade, become to a large extent the wheat-growing Eldorado for a considerable portion of the world.

On the main line of the Canadian Pacific, within the province of Manitoba, there are 113 elevators and warehouses with a total capacity of 7,415,700 bushels. On the Delorraine branch are 68 elevators possessing a total capacity of 1,166,000 bushels. The Glenbora branch has 30 elevators of 631,000 bushels capacity; the Emerson branch 10, with 147,000 capacity; the Souris branch 30, with 642,500 capacity, and on other branches are seven elevators of 58,400 capacity. Total capacity on all branches of the Canadian Pacific of 10,060,600 bushels. Then on the Manitoba and Northwestern railway are 53 elevators having a capacity of 651,000 bushels; on the Great Northwest Central, 5 with 94,000 capacity, and the Northern Pacific 27, of 661,500 capacity. The whole makes a grand total of 343 elevators, possessing an aggregate capacity of 11,467,100 bush.; and the work of building goes on. The flour mills number 43 with a daily capacity of 8,270 barrels; the oatmeal mills 3, with an aggregate of 190 barrels. A number of additional mills are under construction at this writing and the outlook is bright for many more.

SEED GRAIN FREE OF FREIGHT.

The following joint circular has been issued by the Canadian Pacific and Manitoba & Northwestern Railway Companies in respect to free transportation of seed grain: "The prevalence of smutted wheat and poor quality of oats and barley obtained throughout the grain district last year, and a belief that a change of seed will to some extent eradicate the evil, the companies, parties hereto, in order to assist the farmers to procure suitable seed at moderate cost, will, between the 1st March and 15th April next transport free of charge No. 1 and 2 red fyfe wheat, No. 1 and 2 white oats, and 2 and 6 rowed barley (equal to sample in possession of station agents, prepared by D. Horn, Dominion Government inspector, Winnipeg), between stations on our respective lines. This arrangement, so far as the Canadian Pacific railway is concerned, is confined to shipments between stations on the main line, Whitemouth to Calgary inclusive, and branch lines in Manitoba and the Northwest Territories. Seed grain offered for shipment must be carefully examined by the shipping agent, and if equal to the official sample will bill the shipment "For Seed," charges to collect at destination. The grain on arrival at destination to be delivered free on execution of a satisfactory bond from consignee that the grain will be sown by him on his farm, and used for no other purpose. This bond, when properly executed with consignee's receipt for free delivery on the form prescribed by the delivering company's accounting department, will be authority for clearance voucher. Carload lots passing through Winnipeg to destination to be subject to inspection; waybill for such shipments to be endorsed, "To be inspected at Winnipeg, and held to order Robt. Kerr, Shipments intended for delivery at flag stations must be covered by special order from the traffic department of the initial line."

WINNIPEG, Man., March 10, 1893.

SEED TESTING.

By Prof. Wm. Saunders, Ottawa, Ont.

THE work of testing the germinating power of grain and other agricultural seeds is now in active progress at the Central Experimental Farm in Ottawa. Up to the present over 1,600 samples have been tested and reported on this season and on the whole with very gratifying results, showing a good percentage of vitality. There are, however, some districts in the Dominion from which samples have been received of very poor quality and quite unfit for seed. In some parts of Manitoba the harvest season of 1891 was very unfavorable and considerable quantities of grain were left out in stook or stack all winter and threshed in the spring of 1892. A number of samples of such grain have been tested and they show a very low percentage of vitality, many of them ranging from 15 to 40 per cent. only, and are quite unfit for seed. In some other parts of the Dominion, and especially in some sections of Ontario and Quebec, the weather during the last harvest period was very wet and the grain in the stook was subject to repeated wettings before it could be housed, and in the meantime some of it sprouted. A large proportion of such samples also show a low degree of germinating power and if sown as seed will be likely to result in poor crops.

Last year 16,905 sample bags of promising sorts of grain, weighing three pounds each, were sent free through the mail to 9,114 farmers residing in different parts of the Dominion. This large quantity of grain, over 25 tons, was all of first quality and consisted of the most promising sorts which have been tested on the several experimental farms. By instruction of the Hon. Minister of Agriculture a similar distribution is now in progress for this year, and already over 3,000 samples have been sent out, and a large number have been mailed daily. The object of this distribution is to place in the hands of good farmers in all parts of the country samples of the best varieties of oats, barley, wheat, peas, etc., so that they may shortly be available for seed in every district in the country, and eventually result in the displacing of poor, mixed and enfeebled sorts, with varieties possessed of greater fertility. The number of samples sent to one applicant is limited to two in each case, and on this basis a very large number can still be supplied.

CANADA.

—A bonus of $5,000 has been granted to erect a flour mill at Hartney, Man.

—The local mill at Schomberg, Ont., under the management of Miller Dennis, is doing a brisk trade.

—The flouring mills of Cook Bros., at Hensall, Ont., are doing a large amount of gristing and chopping.

—The machinery is being placed in position in the new flour mill of Mr. Campbell, at West Toronto Junction.

—A by-law to grant $3,000 by way of bonus in aid of a flour mill has been adopted at Prince Albert, Sask.

—The Winnipeg Grain and Produce Exchange will raise its annual membership fee to $20 after 1st January, 1894.

—Woodside Bros., of Port Arthur, Ont., have received the contract for fitting up the Fort William elevator with steam grain shovels.

—John McTavish, a North Gower farmer aged 65, fell dead in the office of the McKay Milling Co'y., Ottawa, Ont., while waiting for his pay.

—John McLaren & Co., Renfrew, Ont., have installed an electric light plant in their flour mill, supplied from the Kay Electric Works, Hamilton.

—The Hudson Bay Co's. mill at Prince Albert, Sask, will be enlarged and improved. An elevator will be built and a railway switch will be put into the mill.

—Messrs. Norris & Carruthers, of Toronto, are suing the Canadian Pacific Railway for $21,600 for alleged delay in shipping 16,000 bushels of grain, thereby losing a sale.

—The Board of Trade, Kingston, Ont., intends asking the government for Tete Dupont barracks for a site for an elevator to be built this spring if possible at a cost of $150,000. The elevator will be built by private enterprise.

—Master George Long, son of Rev. Geo. H. Long, of Boissevain, Man., a fortnight ago, met with a misfortune. As he was passing a fly-wheel of a grain crusher, which was in motion, the mitten on his right hand was caught by the shaft, and the arm bent and the bone splintered.

—Commissioner Awrey has the grain exhibit for the World's Fair about ready for shipment. He is now in Chicago arranging details of work.

—Superintendent Whyte, says the C.P.R. will certainly build a large flour shed at Fort William during the coming summer, and that there is every reason to believe a new elevator also will be built, as well as some other projects carried out which are now under consideration.

—The Ogilvie Milling Co., Winnipeg, Man., has placed fifty bags of their patent flour, ninety-eight pounds each, at the disposal of the city relief committee for distribution among the deserving poor of the city. They donate this as a basis for a fund by citizens for the relief of the poor.

—The new mill of Sutherland, Innes & Co., at Coatsworth, Ont., will soon be in running shape. The manager, Mr. McGrath says: "It will be one of the most complete mills in the Province, with three boilers, and stave, hoop and heading machinery, and when run to full capacity will employ 75 men.

—The town authorities at Minnedosa, Man., invite correspondence from parties willing to undertake the construction of a dam and working of water power on the Little Saskatchewan river. A competent civil engineer's report provides for a reservoir or power canal 600 feet long, 150 to 200 feet wide, and of a minimum depth of 13 feet, with four good mill sites adjacent thereto. The engineer states that there is a good opportunity for the utilization of a splendid water power, and estimates that the revenue derived therefrom will probably repay the whole outlay in three or four years.

—The flour mill and store-house of N. Wenger & Sons, Ayton, Ont., was destroyed by fire on 26th ult. The fire started about 8.20 in the evening, in the store-house in which a chopper was run, and although strenuous efforts were made by the villagers to save the mill, which stood about forty feet distant, owing to absence of fire protection, they were unable to do so. The mill, which had a capacity of 200 barrels per day, was one of the best equipped roller mills north of Guelph, and was full of wheat and flour. The loss is heavy, being in the neighborhood of $40,000, on which there is an insurance of $18,000.

—Work on McDonald's oatmeal mill, Woodstock, Ont., is being pushed ahead rapidly. The immense mass of debris, which accumulated within the walls after the recent fire, has all been cleared up, and the joist in the first and second floors are laid. The capacity of the new mill will be about 300 barrels a day, 150 barrels in the pea mill, and about the same in the oatmeal mill. The building when finished will be fully as large as the old one. No flour will be manufactured. What was formerly the flour mill will be used as a store house. Building operations in this town are also being helped in the erection of the East End Flour mill of Mr. McClay. The mill will have a capacity of 150 barrels daily, and will have the complete roller system. All the machinery and fittings of the mill will be put in by W. & J. G. Grcey, of Toronto, while Goldie & McCulloch, Galt, will supply the engine. His trade will be both custom and shipping, and he intends to have the mill in running operation about the middle of May.

—Mr. Geo. T. Marks, president of the Pt. Arthur Board of Trade, in his annual address, said: "The town is as yet without a flouring mill, and I am more than ever convinced that there is no better place on the continent of America for the building up of this industry than here. When in Montreal in December last, a prominent grain and flour firm told me they would erect here a flouring mill of a capacity of 200 to 500 barrels per day if they could get reasonable terms and a guarantee that their flour and surplus wheat could be forwarded upon a through rate, as is now done with wheat from the elevators here and at Fort William. I think this matter could be arranged with the railway company very easily, and it should be done, so that we could be in a position to continue these negotiations without delay, or initiate others. The elevator storage capacity at Port Arthur and Fort William is now about 4,000,000 bushels, and the Canadian Pacific Co. proposes to erect during the coming season another elevator of at least 1,000,000 bushels capacity. The establishment here a year ago, in connection with the Port Arthur elevator, of a system of improved grain cleaning machinery has been successful, and during the year 1892 more than 1,000,000 bushels of the Manitoba crops of 1891 and 1892 were handled at this point. This means a great deal of money paid out for wages, besides adding largely to our lake tonnage and exports."

PERSONAL.

Mr. John Askew, miller, Leamington, Ont., has been appointed License Commissioner for South Essex.

The death of Mr. Wm. Sanderson, of Milwaukee, Wis., took place last month. Deceased was a prominent member of the Executive of the Millers' National Association of the United States.

Mr. James K. Cameron, secretary of the Monetary Times Company, died suddenly, whilst taking his evening meal, on Sunday, 12th inst. Deceased had been connected with the Monetary Times for 20 years. Heart failure was the cause of death. Aged 36. He leaves a widow and one child.

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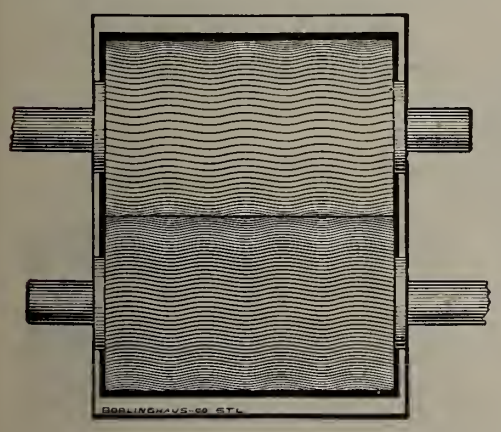

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AND INDEX TO THE PLANING MILLS AND SASH AND DOOR FACTORIES OF CANADA. . . . . .

THE Publisher is now open to receive subscriptions for the above Directory of the lumber trades. No effort is being spared to make this publication thoroughly complete and reliable in every detail, and it is hoped that all MILLER subscribers interested will fill in the following subscription blank and return to this office at as early a date as possible.

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Class of manufacture: .....

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Post Office: ..... Shipping Point: .....

Dealers in lumber, shingles, lath, etc., will please fill in following blank:

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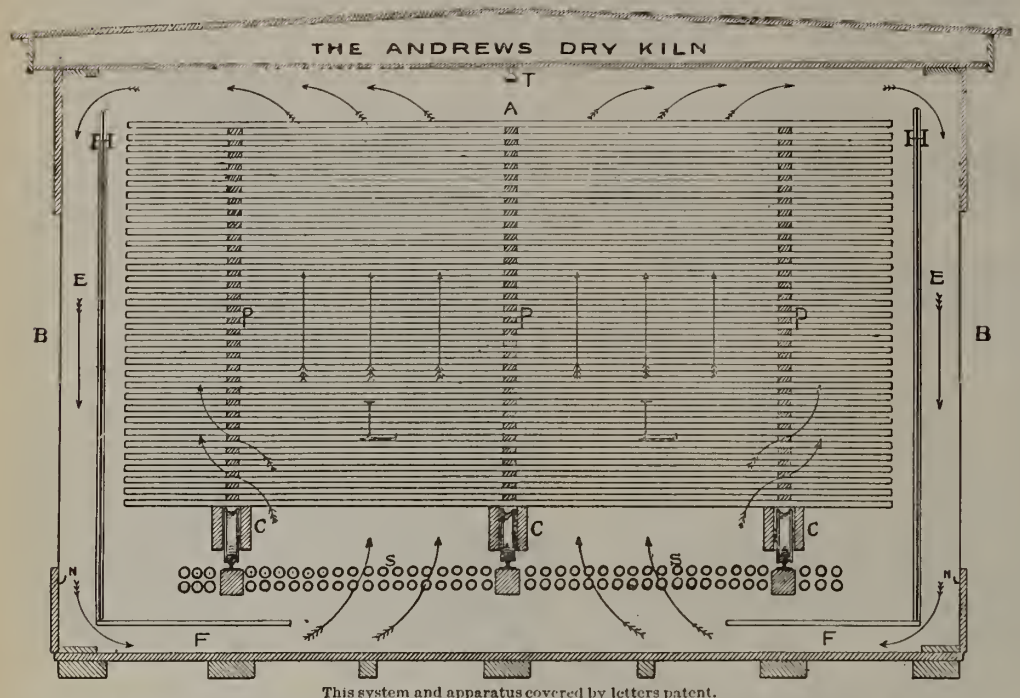

This system and apparatus covered by letters patent.

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No Fan — No Engine
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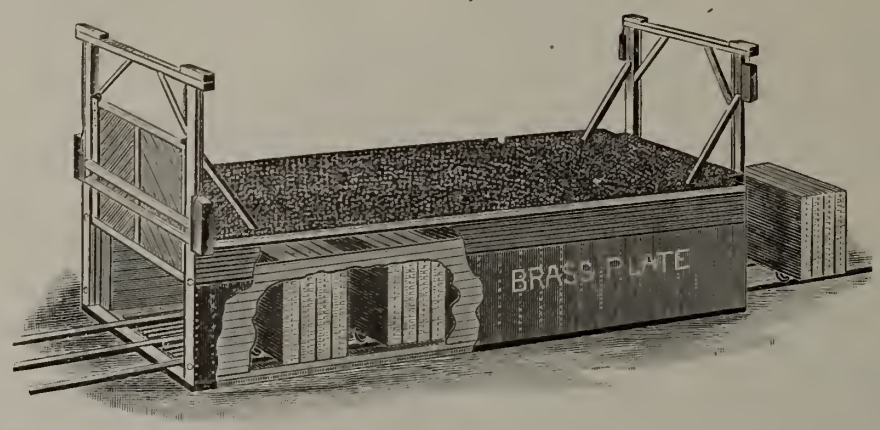

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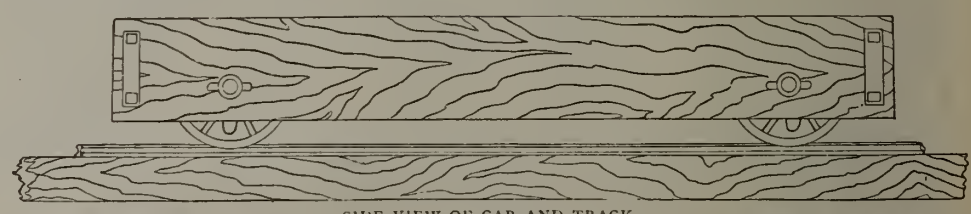
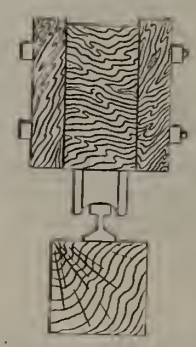
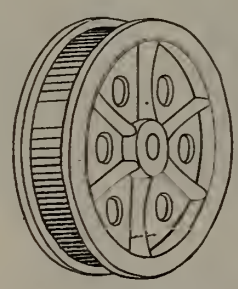


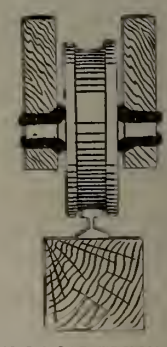
SIDE VIEW OF CAR AND TRACK.



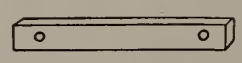
DOUBLE FLANGE WHEEL ON SINGLE TRACK



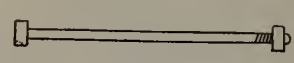
CAR WHEEL, DOUBLE FLANGE



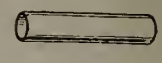
SECTION OF CAR TRUCK, SHOWING AXLE BOX.



STRAP WASHER



BOLT



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TWO FAVORITE Horizontal Cleaners:

THE

Eureka Special Close Scouring Horizontal Smutter

Unequalled
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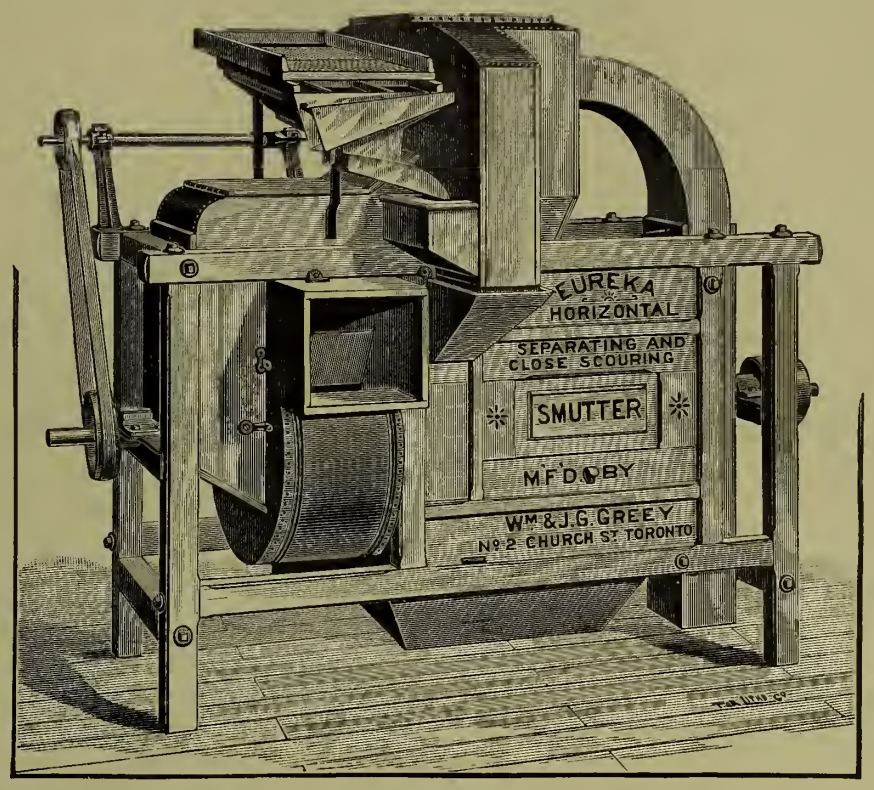
Cleansing
of
Dirty Wheat



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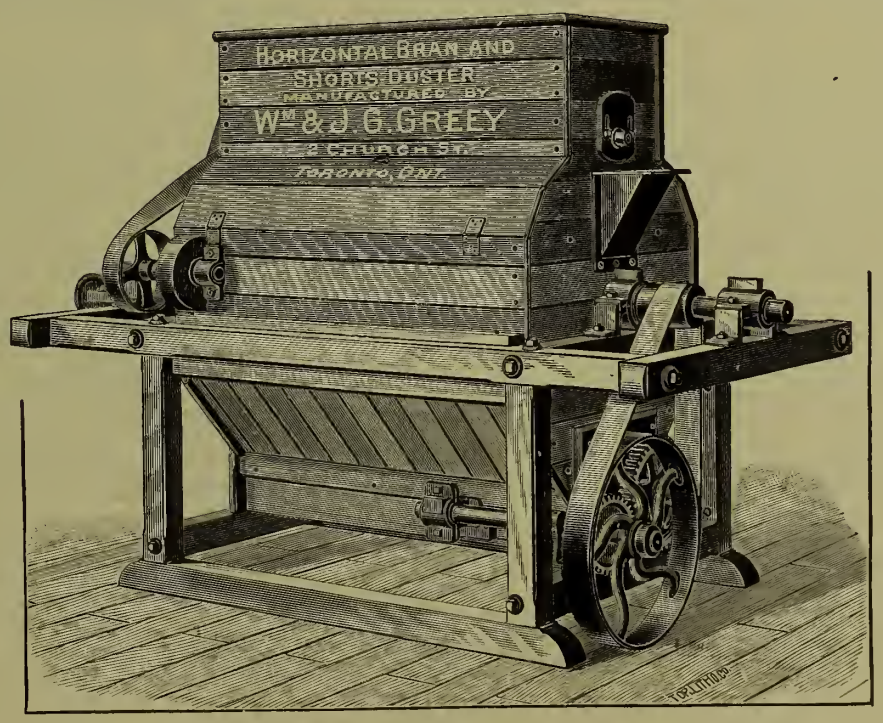

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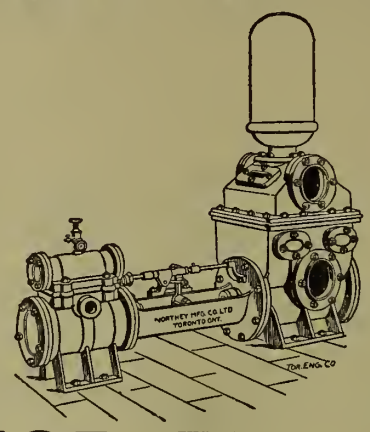

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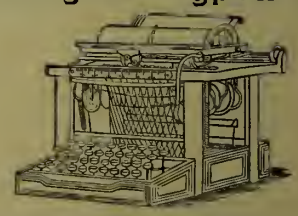

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NEW SERIES "MECHANICAL AND MILLING NEWS"

OLD SERIES, VOL. XI. / NEW SERIES, VOL. III. } NUMBER 4. TORONTO, ONT., APRIL, 1893 { TERMS, $1.00 PER YEAR / SINGLE COPIES, 10 CENTS

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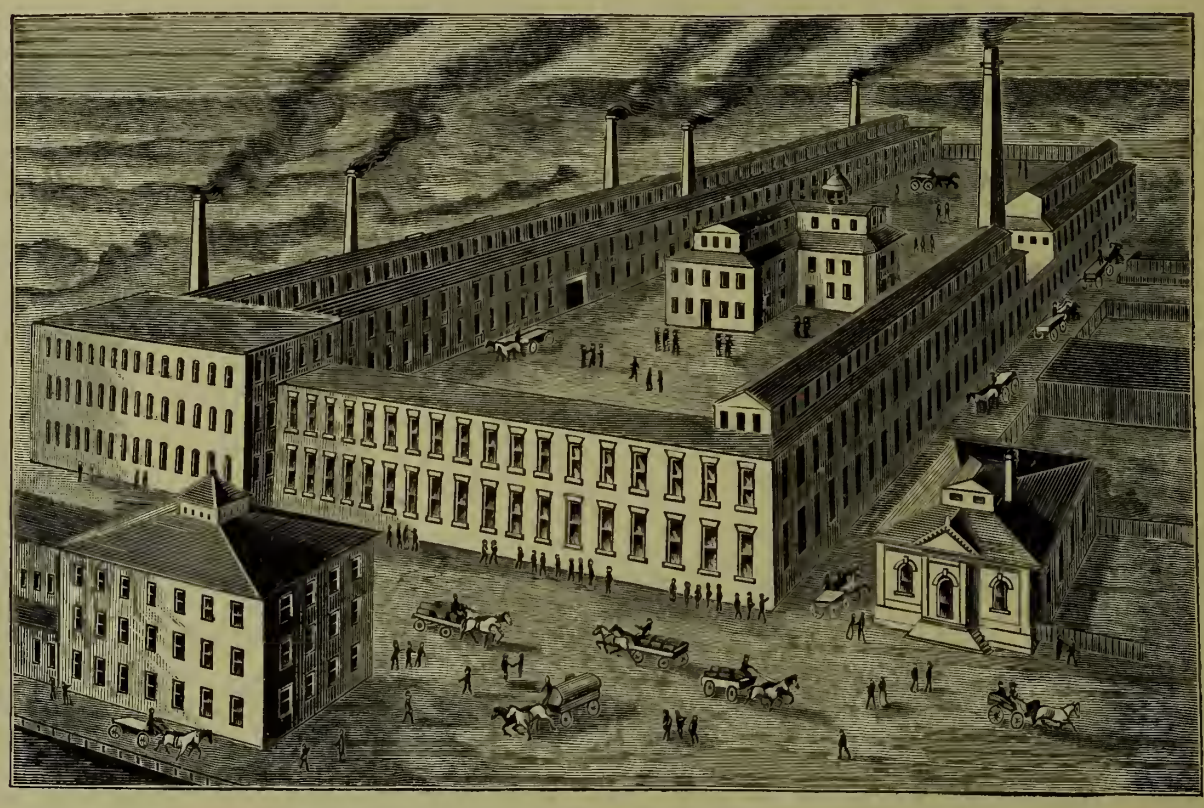

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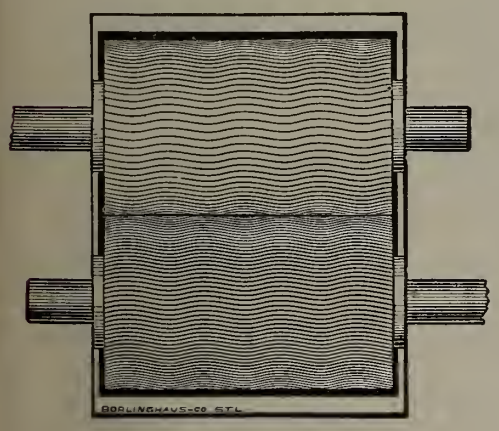

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Aspirator at head of Sieve.

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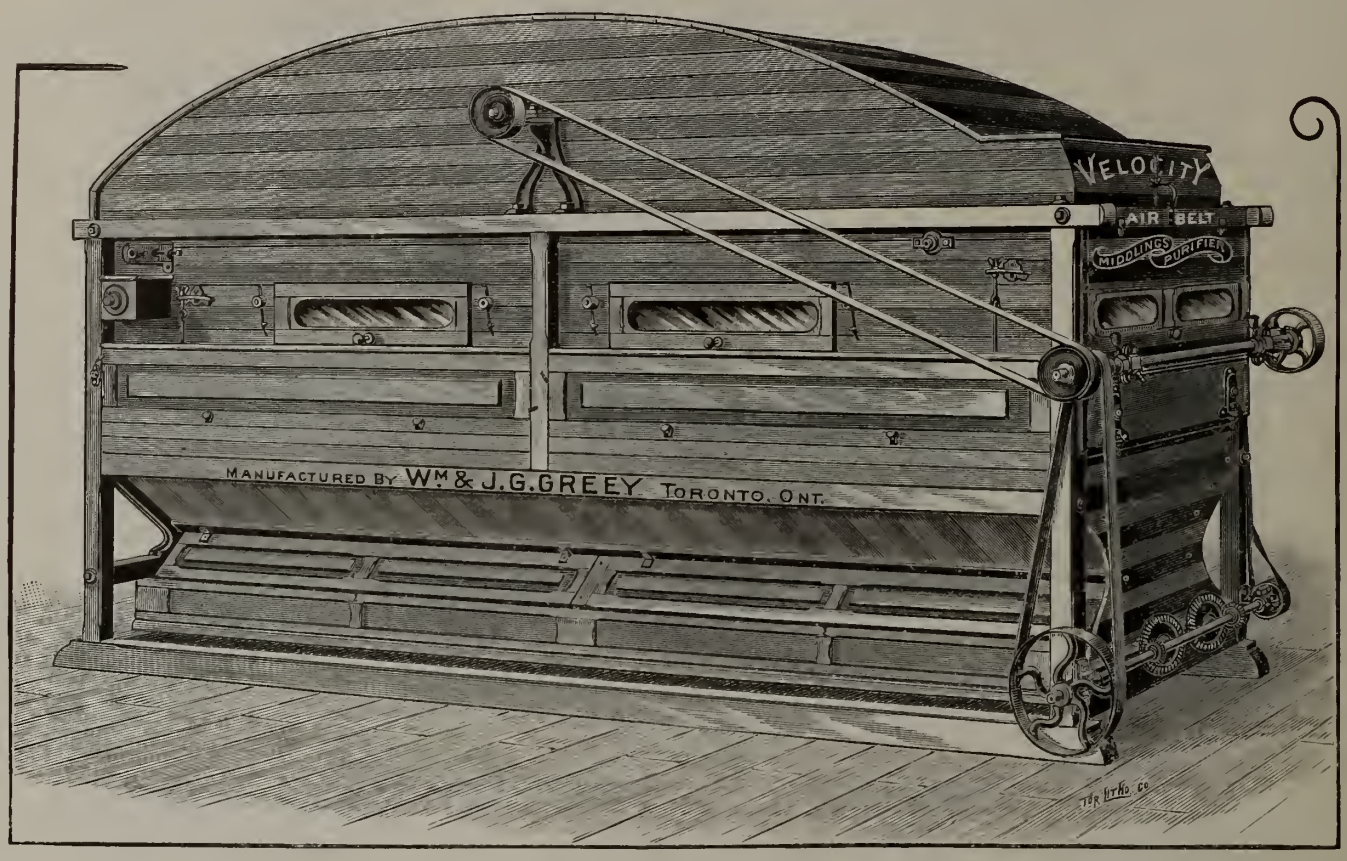

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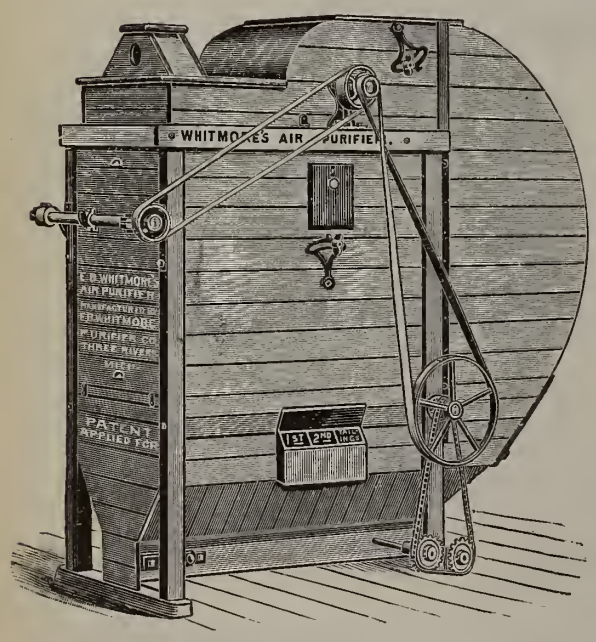

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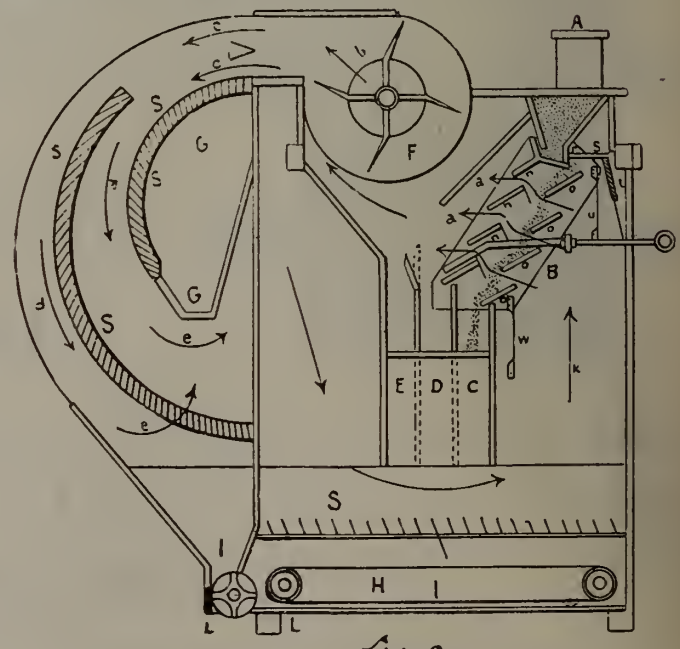

Fig. 2.

SOLE MANUFACTURERS FOR CANADA:

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THE CANADIAN MILLER

Old Series, Vol. XI. } Number 4. TORONTO, ONT., APRIL, 1893 { Terms, $1.00 Per Year
New Series, Vol. III. } { Single Copies, 10 Cents

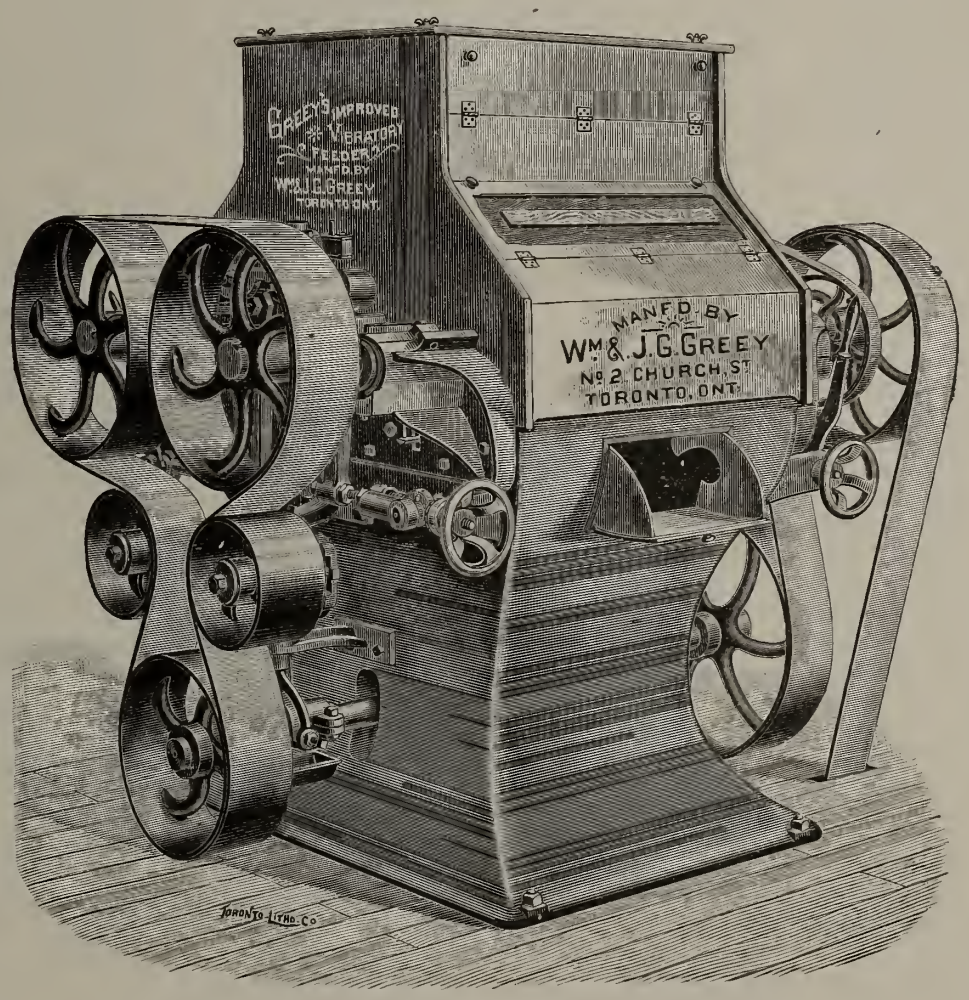
A NEW ROLLER MILL.

We are able to present to our readers this month a cut of a new double roller mill manufactured by Messrs. Wm. & J. G. Greey, No. 2 Church St. Toronto.

This machine embodies several new and unique features which are the outcome of experience in the building and operation of this class of machinery. The frame, as will be seen by the cut, is one solid casting provided with suitable and convenient opening for examining the work of the rolls. The grinding and relieving adjustments are the same as have been used by this firm for some years securing the utmost nicety of adjustment and perfect rigidity, and which has proved so eminently satisfactory in every case where adopted. The general appearance of the machine has been greatly improved, the frame being higher than formerly, the roll bearings lengthened and large oil receptacles arranged beneath each, with draining holes and screw plugs for the purpose of drawing off the old and waste oil and preventing the same from dropping on the floor. The sides of the frame are well stiffened by ribs and brackets but by far the most important improvement is the one which appears most prominent in the cut, viz., the novel arrangement of the slow roll hold back belt. It is well known to those using this class of machine, that where two separate belts are used from the counter shaft on to the slow rolls the difficulty has been that in tightening down the counter shaft to suit the main driving belt on the fast side these short belts on slow side have always given trouble by running off to either one side or the other, necessitating the cutting and lengthening or shortening, as the case might be, of these short belts. In this new arrangement only one belt is used on the slow side and one pulley on the counter shaft so that by means of the two small tightners which intervene between that pulley and the two slow roll pulleys, the belt is made to take a closer grip of the small pulley on the counter shaft, and at the same time a better hold on the roll pulleys than it would otherwise have. These small tightner pulleys are arranged to work independently of each other and can either be tightened or slackened as necessity may arise, enabling the miller to maintain the counter shaft in a horizontal position without cutting or altering either main or slow belts. This improvement is of such a nature that it would be obvious to any practical miller that he has complete control of his machine. Another advantage of this arrangement is, the slow pulleys being in the same line, the room required by the machine is lessened from 5 to 8 inches.

The feeds used on these mills have been thoroughly proved and are of the vibrating kind provided with automatic appliances for regulating the supply and spreading it evenly over the whole width of the machine. One important feature in the use of these feeds is that all bearings are on the outside of the cabinet and firmly secured to the main casting of the roller frame, thereby avoiding the undesirable tremble or shake which is noticeable in those machines where bearings or springs are secured to the roll cabinet. The shoe of the feed is supported by adjustable wrought iron links in place of springs and can be easily and quickly levelled or adjusted by means of the thumb nuts shown on the top of the cabinet.

The machine is handsomely decorated, wood work varnished and built of thoroughly seasoned material. The whole presenting a very neat and substantial appearance. The foregoing improvements, together with the material and finish of the rolls themselves, which have been brought up to the very highest standard of excellence both as regards hardness and regularity of temper places the machine at the very head of the front rank of mill machinery.



New Roller Mill.

The importance in this age of keen competition of the successful miller keeping in close touch with the newest and best in mill machinery is a matter too obvious to every one to need any attention here.

THE IMPORTANCE OF KEEPING ROLLS TRUE.

An important factor in milling, and one that becomes doubly important in times of close margins, like the present, writes J. D. Davidson in the Roller Miller, is the condition of the rolls. Now conditions of rolls included several points, but I shall here speak only of the one which in my opinion is oftenest overlooked—that of running the rolls. I speak from my own experience when I say that a surprising economy, both in flour and power, results from truing up rolls. Yet I venture to guess that out of a hundred millers seventy-five, at least, do not true up their rolls more than once a year. This is a serious mistake.

We all know that the work of every succeeding machine is very greatly affected by that of the rolls. If the rolls are of untrue face they will unevenly reduce the stock and start a train of mischief extending quite to the end of the mill. The flour reels will bolt unevenly and will be reduced in bolting capacity. Stock that should go through fine silk to flour bin will be carried over to cut-off, or even to the tail and thence to the next rolls, crowding them and to a considerable extent spoiling their work. Should these rolls also be out of truth the evil is multiplied in many directions, with the result that stock gets into the best flour which ought to have gone to low-grade. Nor is this all of the damage. Rolls of untrue face consume much more power than they ought to, for they are continually crowded by reason of uneven work. And then the silks. Being loaded above their capacity with irregular stock, their meshes are strained and distorted, and the whole cloth gets loose and full of holes. Presently, and long before it ought to be necessary, the cloths give out and have to be replaced with new ones. Furthermore, it becomes imperative to reduce the feed of the mill in order to make a finish, and even then a proper one is impossible. It follows from this that more wheat is required to the barrel of flour, and it remains a fact that the flour is not what it ought to be.

From the single defect under consideration, then, it transpires that more wheat, more power, more fuel are needed for a given capacity; items which represent a considerable percentage on the annual running expenses of the mill. Take off something for depreciated flour, and we have the principal losses due to rolls that are out of truth. I could point out others of less though by no means trifling importance, but I have indicated enough, I believe, to establish my case.

The remedy, of course, consists in more frequent truing of rolls. Some rolls get out of truth more easily than others, and hence need more frequent treatment, but as a general rule I recommend that truing be done, as a rule, three times a year. Few rolls in steady use will keep their truth longer than four months. It costs something to follow this rule, but the cost is returned many times over in enlarged capacity, improved product, and decreased expenses.

A mill owner told me recently that he started up his mill two years ago using four bushels and thirty pounds of wheat to the barrel of high-grade flour, but that now it takes five bushels, and sometimes more, while the flour is not as good as formerly. He had put in more machinery, and changed head millers twice, without improving matters in the least that he could see. I asked him if his rolls were in true face. He thought they were, but did not know. I have since learned that all the rolls in that mill have been trued up, and I have no doubt the results were highly gratifying.

Has your subscription to Canadian Miller expired?

EVERYONE who knows him has a good word to say for Mr. N. Wenger, of Wenger Bros., Ayton, Ont. I had a conversation with Mr. Wenger a few weeks ago, and was sorry to learn that it is a question whether the firm will re-enter the milling business again, the fire of two months ago having completely destroyed their flour mill. Wenger Bros. are full of business quite aside from flour milling. They are proprietors of a large general store, and are extensive shippers of farmers' produce. They are owners of a creamery in connection with which they, last season, made and disposed of 170,000 pounds of butter, and paid out $37,000. A sawmill is also owned by the firm where staves and heading are manufactured in considerable quantity. Chatting directly on the question of flour milling, Mr. Wenger said "that last year had been a poor year for the miller. Prices were so low that there was no money in the business, whilst the glutted condition of the foreign market closed out any profitable outlet that might have existed for export flour." Queried on his views regarding the continued low prices of wheat, Mr. Wenger said "that everything pointed to low-priced wheat for the future. The farmer need not hope to see dollar wheat again. But this does not mean unprofitable farming. So far as my observation has gone, and my business brings me in contact with large numbers of farmers, they have not fared badly during the past year. Most of them have lived well, paid their way, and been enabled to bank some surplus. It is like this: The labor of working the farm to-day is play compared with that of a few years ago. Farm machinery has been brought up to that degree of perfection that the crops are now handled with ease. The cost of manual labor is greatly lessened, and the size of the product is relatively increased. Though the farmer does not receive the prices of the past the cost of producing a bushel of wheat is not what it was then. I sometimes think that farmers forget this."

* * * *

Mr. Arthur Cowan, of Galt, Ont., who has recently returned home from a business trip to British Columbia says: "The past winter has been quite as severe throughout the west as here, and that on many ranches the loss of sheep, cattle and horses, through extreme cold and lack of feed, had been very great. The season was yet backward, the snow lying upon the ground in Manitoba as he returned home. Emigration was pouring into the country from all quarters, the least desirable being that from contiguous American states, which was of a kind that never would be satisfied with any occupation that meant work to make a living. They could have done fairly well where they left, but they had not the grit to stand a reverse or two, and they pulled up stakes to try the northwest, where many of them will prove chronic grumblers. The Edmonton district is drawing the bulk of the emigration, and the accounts of the quality and capacity of the land there for all classes of agriculture are most encouraging. There is a large mill and elevators there, and the product of the mill is shipped west over the mountains to British Columbia."

* * * *

Mr. M. McLaughlin, president of the Dominion Millers' Association, having had tested the sample flours received from the West Indies by secretary Watts, and which are the popular brands in that market, has this to say: "Sample No. 1 (cost in wood in New York, $4.75 per bbl.), is a hard wheat patent, granular, well made, and of good color, but in strength considerably inferior to patents made in Canada from pure Manitoba hard wheat. Canadian mills running on Manitoba wheat would have no trouble duplicating this flour. Sample No. 2 (cost in wood $4 in New York), is a poor family flour, very dark, and of a strength about equal to flour from average Ontario spring wheat. Sample No. 3, which is branded "Double Extra" (cost in wood $2.60 in New York), is a winter wheat, low grade, poor in color and specky. Our mills would have no difficulty in duplicating these three flours, which are sent to us as being what is wanted in the West India Islands; nor would a Canadian mill have any trouble in branding their output in a much more attractive way than these three barrels are branded. With the shipping facilities now at our service, via Halifax, and with wheat of the quality and cost of our present Canadian crop, any average Canadian mill should have no difficulty in placing some of its product in West India markets profitably, in comparison with United States shipments—such as the sample barrels. Mills wishing to test it should, in deference to the sentiment in favor of round hoop barrels, use this kind only."

* * * *

A farmer of Otterburne, Man., gives this as his experience with frosted wheat for seed purposes: "Having made trials on several kinds of soil and with several grades of wheat, measuring in some cases by weighing and in some cases by measure, I find in all tests made in which the seed was measured by weight the yield was much greater from the frosted seed than from No. 1 hard. In most cases where the seed was sown by measure the yield was about equal. In a few instances where the seed was sown by measure the yield from No. 1 hard was from fifteen to seventy-five pounds, and in one instance two bushels and fifteen pounds more than was obtained from frosted seed, but in this case the seed was very poor, in fact the leanest grains I could procure out of a few bushels of frozen feed wheat. Now, in most test cases made by the Experimental Farm at Brandon, if not in every instance, the yield was greater from frosted seed. Last year the yield from 3 regular being nearly double that collected from No. 1 hard." I feel that this question of how to deal with frosted wheat is one of several problems that besets grain men and farmers in Manitoba and the Northwest and I shall be glad to hear from readers who can impart information on the matter.

* * * *

An Australian correspondent of the Bakers' Record writes to that paper as follows: "It has for a long time been a puzzle to bakers and millers on this side of the globe to account satisfactorily for the violet spots in bread. I have known millers who have been using violet ink for branding their bags, clear every particle of it from their premises, and still the same spots would appear in the bread. It is of quite a different nature to discoloration from ink, which would, if in solid form, appear more flaky in the bread, and would also appear in the dough. For years I have found spots in bread, but never in flour, and not more than three or four times in dough, and then in very hot weather only. In my opinion the coloring matter is produced by the larvæ or grub of a species of the cochineal fly which is deposited in the wheat and ground with it, and when the particles (which have not appeared in the dough) are acted upon by the heat acquired in the process of baking, they expand and give out the color. Of course, this is only theory, but I have formed it on a little experience of fifty years ago. About this time a miller, who was also a baker, by accident knocked over a bottle containing cochineal, some of which was spilled into a sack of wheat which stood by, and which he did not intend to have ground, but after a time it was ground and baked, and the bread was full of violet-colored flakes, not spots."

* * * *

The movement in Montreal for the formation of a wheat pit on similar lines to that which exists in Chicago is meeting with determined opposition from leading members of the Montreal Board of Trade and Corn Exchange. Mr. W. W. Ogilvie, president of the Board of Trade; D. A. McPherson, president Corn Exchange; A. G. Thompson, and others, who are extensive handlers of wheat at western points, including Chicago, Duluth, Toledo and Manitoba, have expressed their disapproval of the scheme. The markets previously named are centres for immense wheat producing sections, where millions of bushels are continually in storage, and contracts for large quantities can at any time be completed. "Grain dealers in Montreal," they state, "can at a trifling expense by telegraph purchase through an agent at these points on a commission of ⅛ cent per bushel for future delivery, with a certainty of getting their wheat on the due date of contract, and all transactions of this nature, bind the seller and buyer respectively to the condition of actual delivery and acceptance of grain." They claim that this system of trading cannot be satisfactorily carried on here for the reason that Montreal is not a wheat storing centre, the efforts of the Montreal trader in all cases being to pass his grain from the inland to the ocean vessel direct without increasing the expense of storage. The western wheat markets are at too great a distance to admit of dealing in futures conveniently that are purely speculative, as the seller of Chicago or Manitoba wheat on the basis of delivery here would in all cases be obliged to have his wheat shipped at these western points from twelve to fifteen days previous to due date of contract, which would place operators here at a great disadvantage as compared with those in Chicago or other western wheat centres, and, consequently, the proposed wheat pit must be conducted on the basis of settling differences, and could not be ranked as trading in grain, and must be designated as simply gambling of the character already carried on under the term of "bucket shops." These gentlemen are decidedly of the opinion that it would be unworthy of the Montreal Corn Exchange to engage in this line of operations.

* * * *

The discussion as to the origin of Fyfe wheat does not die. I am in receipt of a letter from Mr. David Plewes, the old-time and efficient secretary of the Dominion Millers' Association, and now agent of the Ontario Export Association, in Liverpool, Eng., on the question. He says: "In your February issue there is an article "Origin of Fyfe wheat," which I personally know is incorrect. I dare say this wheat was introduced into Manitoba in 1858 and also into Wisconsin in 1856, but long before that it was extensively grown in Ontario around where Fergus and Arthur now stand. In 1852 I was miller in Lawville mills, township of Nelson; there were no railroads in that part of Ontario then, and wheat came to us from the back country, 60 or 80 miles on sleighs and some times those back country farmers brought us a very hard spring wheat called Glasgow wheat, the veritable wheat now known as Fyfe wheat. At first I was afraid to put it among the other spring wheats. I did not then know its milling properties. I had only been one year in the country then and practically knew nothing, and at that time there was no one there to instruct me, as all the rest (so far as milling went) knew less than I did; and it was by the merest accident I found out its milling property. Our flour trade outside of farmers' grist was chiefly to bakers; and at one time having scarcely anything in the mill but the choicest white wheat, I had considerable difficulty in pleasing my bread baking customers. But having some old flour on hand in the mill, carried over from the former year, that had gone sour and slightly musty, I started to mix in about one-third of this old flour among my bakers' flour and for awhile my baker friends were greatly pleased with the flour I sent them. Soon, however, the old flour stock gave out and experience had taught me there was difficulty ahead—unless something was put in to take the place of the old flour. I risked mixing this hard spring wheat (though I knew I was darkening the color) but experience proved the virtue of this then somewhat despised variety of spring wheat. My opinion is, small quantities were grown around Arthur prior to 1851." Mr. James A. Bell, of Beaverton, Ont., has this to say on the subject: "Fyfe wheat is a Russian variety of fall wheat which was introduced into the county of Peterborough by a gentleman named Fyfe. Fyfe had a nephew engaged in the Baltic wheat trade at the time, from whom he obtained a bushel of the wheat. On sowing the grain it did not prove at all satisfactory as a fall wheat and the result was a poor and weakly crop. A little of the seed, however, had accidentally been left in the bag and Mr. Fyfe thought he would try it as a spring sowing. He did, and the result was magnificent heads of plump, hard grain. He carefully preserved the seed and this is the origin in Canada of the famous "Fyfe" wheat. It is certain that the variety is unknown in Scotland, although many attempts have been made to trace it to the Land o' Cakes."

COOPERAGE D'PT.

There is a close affinity between the work of the cooper and the business of milling. The miller is either his own cooper, having a cooperage as an adjunct to his mill, or else he rests for his supplies on an outside cooperage. The cooper in any case finds one of his best customers in the miller. The object of this department is to bring each in close touch with the other and to materially advance the interests of both trades.

TRADE REVIEW.

Since the March report there is really nothing of great importance to communicate in connection with the situation in cooperage stock.

All of the different factories started up running in February and early March, with the result that every factory in Ontario is now running full and having full supplies of bolts, logs, etc., the new cut in the course of three or four weeks will be sufficiently dry to be placed upon the market.

The shortage in staves has been phenomenal, on account of the old stock of staves having given out, the heavy demand made on Canada for the Minneapolis, St. Louis, Milwaukee, and western markets absolving stock very quickly and not sufficient stock was carried over by Ontario manufacturers to take care of the home trade. Many of the milling concerns all over Ontario and Quebec found considerable trouble in obtaining dry stock to meet their needs during the month of March, but the situation will be soon relieved, and millers will be able to obtain their full requirements without difficulty.

The situation on hoops has been already relieved and there is now an ample supply of hoops on the market to take care of all orders being placed.

Heading still remains phenomenally short and will so remain for some little time to come; at present it is bringing high prices all over the country.

The demand for black ash racked hoops is now very limited indeed, nearly all of the millers and coopering concerns discarding the black ash racked hoop for the patent elm hoop.

There have been numerous complaints from millers on account of the stock shipped not being sufficiently dry for them to use to make a good barrel for prompt use, but with finer drying weather, such as we are now having through the timber belt, this objection will be removed and stock will be placed on the market in first class condition. There have been very heavy orders placed with Canadian manufacturers for cooperage stock from all the leading centres, with the result that over 60 per cent. of the entire production of Ontario has been already contracted ahead and in the event of the flour trade being fairly good and having a fair apple crop, the bulk of the cut of this year will be needed for immediate consumption, so that while we do not look for any advance in prices to local trade, the heavy sales already made will prevent any material drop in prices. Millers and coopers would always do well during the fall of the year, to put in good supplies of stock ahead, as at that season of the year prices are always at the lowest and the quality of the stock is always superior, on account of being thoroughly dry, which with air dried stock it is impossible to get in the dead of winter.

The following are present prices on cooperage stock in Ontario:

	Per net 1,000
No. 1 32″ staves	$5 50
" 2 "	3 25
" 1 28½ and 30″ staves	5 00
" 2 " "	3 00
" 1 24″ staves	3 75
A No. 1 6ft. 9″ patent coiled hoops	6 10
" 6ft. 6″ " "	6 00
" 5ft. 6″ " "	5 25
" 4ft. 4″ " "	3 50
Headliners	35
	Per set
No. 1 20½″ heading	6c.
" 19″ "	5c.
" 18½″ "	4¾c.
" 17⅛″ "	4¼c.
" 16½″ "	4c.
" 14½″ "	3½c.

MINNEAPOLIS CONDITIONS.

The season is now so far advanced, says the Minneapolis Lumberman, that wind and sun have done much toward increasing the supply of barrel stocks at the flour barrel shops. All the shops are running up to their full capacity. The mills are still taking barrels as fast as the shops turn them out, with no signs of a decreased demand. There has been no shortage in heading, elm staves or any other sort of stock the past week, (April 14) and so plentifully are these materials coming in just now that the shops can afford to choose from the offerings on the market. Any poorly seasoned stock is laid by to air dry. Elm staves are easier in price and seem to be sloping off toward summer prices. No one is making contracts now for any large amounts, and those who buy on the market are taking only small lots. Prices fall slowly, for the stave men have enjoyed so long a season of extra good prices that it is difficult to persuade them that old time prices will return. From $7.25 to $7.50 per thousand is paid now for staves delivered here. As soon as navigation opens there will be a tumble in the price of staves. Prices will rule no higher than last year, probably, and Canadian and Michigan manufacturers are already making overtures for summer contracts. Oak staves have dropped out of the market here pretty thoroughly, but those that are sold here are quite stiff at 14c. per set. Heading still holds at 5½c. but it is looking down. It will not be long before 5c. will be the ruling price. Half-barrel heading are bought at 4 cents, and half-barrel elm staves are holding at $5.25.

The hoop supply is good. The greater part of the hickory hoops are now in, though they will be straggling in for six weeks yet. There is universal satisfaction expressed at the quality of the hickory hoop stock received this season. The greater part of the stock comes from Tennessee and Alabama. Much of last year's stock came from Missouri, and the stock was light or uneven. But the hoops received this year are of satisfactory weight, and though it was thought three months ago the supply would be short at certain of the shops, there has been plenty of stock thus far. Coiled elm hoops are selling at from $7.10 to $7.25. There will not be much change in this stock throughout the season, though it is thought it will touch $7. A number of mills are being built in this state for the manufacture of these hoops. Already they are furnishing some stock to this market.

CHICAGO MARKETS.

Tierces and pork barrels, remarks the Chicago Lumberman, are quiet this week, especially the latter. A few ash barrels have been sold at 70 cents, but the range of prices for pork is from 65 to 67½ cents. Lard tierces are selling at 90 cents, one round lot of 2,000 having been disposed of this week at that price. Coopers generally are asking 92½ cents, but are not getting it.

Tierce staves were slightly higher the first of the week, resulting in more liberal receipts. Coopers were inclined to buy freely, but the receipts of hogs having fallen off the market is again slow. Coopers now hesitate about buying further supplies unless they can do so at a discount from late prices. Good tierce staves can be bought for $17, and some large lots have been sold to the prison for considerably less. Poor staves are not wanted on account of the slack demand for barrels.

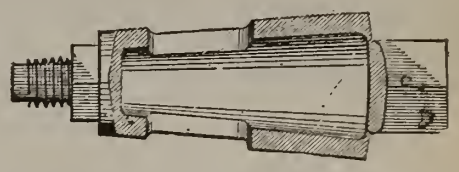
There is considerable call for circled tierce heading at 11½ cents in car lots. Single loads have been sold at 14 cents. There is no enquiry for pork heading. Tierce hoops are arriving in excess of demand and prison coopers report having bought several car loads for $10.-50. A few cars have been sold to city coopers for $11. There is no sale for pork hoops. Flour barrel hoops are a trifle lower, sales having been made at $5.60 to $5.75. There has been a liberal falling off in both demand and prices for flour barrel staves and heading. Syrup barrel hoops are in good request. Shippers could realize $10 here for either ash, oak or hickory.

BUFFALO BUSINESS.

A Buffalo correspondent of the Northwestern Miller says: "The season is very late, and cooper stock is almost as scarce as ever. Dealers have not caught up with the demand, though there is somewhat a better movement. Exasperating delays by the railroads are reported. A week in getting a single carload to Rochester is a sample. Prices remain unchanged. Dry elm flour barrel staves rule at $5.50 per M. heading at 6c. per set, hickory hoops at $6.95 at 7 per M. Chestnut hoops have advanced, commanding $5 by the carload, with maple the same. Buffalo is not using chestnut or maple to any extent, but there is quite a demand for them in Rochester.

DEFECTIVE WATER COCK.

A foreign paper recently published the illustration given herewith showing a defect common to steam and water cocks. In case such a cock was attached to a



boiler blow-off, the most serious consequences might follow if an attempt was made to open it. Better measure all cocks before putting them on dangerous places.

PERPETUAL MOTION.

I have read with much amusement, writes a correspondent of Power, the several designs lately described to create motion without expense. I regard them all as mere playthings, which never can have any real commercial value, from the simple fundamental truth that wherever there is an action there is also a reaction of the same magnitude. In other words, there can be no perpetual motion. But still I am inclined to hang a tail to this doctrine, in the form of a (to my mind, at least,) sufficient argument; namely, because we small things are not brainy enough to know how it could be done. There are manifestations in the physical world which would tend to show that not all motion is dependent on the consumption of heat, to which, under our present limited knowledge of natural laws, we have invariably to resort wherever we want force and motion for any purpose. A lamp-wick will draw up against gravity a considerable amount of a fluid to a height of five or six inches, without consuming any heat in so doing, as careful experiments have shown. And it is by no means certain that heat is consumed in the movements of the nutritive fluids of the highest tree, in its capillaries; nor is there any reason why it should, while a dead wick can do it within certain limits.

In spite of all theories, it is not certain that the heavenly bodies move under compulsion of heat-producing motion. True, we get light and heat from the sun, and it is but natural to suppose that these might, in some way, be helping in our progress through space. But then, the slightest variations in the amounts received would have to show perceptible variations in speed (one cycle compared with another), which is by no means the case. To explain the movements of the heavenly bodies by attraction, repulsion and gravitation needs no presence or influence of heat, no more than does the swinging of the compass-needle under the influence of iron near by.

In looking the whole ground over as impartial observers, we are compelled to say that we use heat to produce force and motion only because we do not know of any other way to obtain them in commercially valuable form, and not because there is no other way. As soon as we get far enough to have the natural powers of capillarity controlled so as to raise great amounts of liquids in very short times to a lasting height of only one foot above level, we have a costless power for any well-constructed turbine wheel. But that will be a long way off, as the discovery of so many things will be, in spite of all our little bit of knowledge. I shall always remember what Baron Liebig told us in a lecture at Munich University about thirty-five years ago: "If our earth were to be maintained and moved only by what forces and powers we know of and are able to understand, I certainly should be glad for some other place of safety." Spontaneous (or perpetual) motion is therefore possible, and occurs as a reality. But to try to obtain it by mechanical, pneumatic or hydrostic means, as they are at command of our limited knowledge at this time, is simply folly. For us, pressure of any kind is accompanied by counter-pressure at all times, at all places, and under all circumstances.

Messrs. Steinhoff & Gordon, of Wallaceburg, Ont., manufacturers of cooperage, last year did a business represented by 60,000,000 staves, 12,000,000 hoops, 1,000,000 heads, besides selling 4,000 logs and 8,000 cords of wood and bolts, totaling in value nearly $500,-000.

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

MIGHT BE WORSE.

THOUGH there may not be any money in the idea it is yet true that when depressed in spirits over an adverse turn in circumstances there is consolation in the thought that perhaps we are in no worse shape than others around about us. We act on the principle seemingly that misery likes company. We may be in the slough of despond but comfort ourselves that the other fellow is there too.

Not for some years have the milling trades in Canada been more depressed than during the past year. Wherever one meets a brother dusty the same tale of woe is related. Prices are down, gone no one knows where; the market at home is demoralized; foreign markets are apparently hopelessly broken to pieces. At every point flour is a glut. Of course the condition could not be worse, and no condition could be worse than our own.

This is the way the miller feels when he gets in the dumps. Let us look into the matter. Physicians tell us that when melancholy takes hold of the patient the first remedy is to get him away from himself. Get the man thinking of somebody else; get him somewhere else. We apply the same principle to the miller and ask him to look abroad.

The Canadian miller is not making money. Probably not; at least not what he thinks he ought to make, though we know of several millers in the province, who will admit that their balance sheet of the past year shows a comfortable amount to the credit of profit and loss. Elsewhere we have noted the fact that Budapest millers have recently been meeting in conference, trying to devise some scheme to bring back to the Pest trade that has gone from them, and for the want of which the mill proprietor is suffering in pocket. One statement is made, on it is believed good authority, that the Concordia mill, of Budapest, has reduced the value of its shares from 500 to 400 florins, having suffered a loss of $125,000 on the business of the past year. British millers are all sad of heart and evidence is not lacking of the losses that have been made in milling in England and Scotland during the year lately past. The London correspondent of the Northwestern Miller tells in a recent letter that Messrs. James Tucker (Ltd.), of Cardwell, lost about $185,000 the year now closed. On the news page of this issue of the MILLER is a record of the failure of a large and supposed-to-be prosperous Minneapolis milling concern that had been in business for nearly a score of years, the suspension being brought about by the continued stringency in the flour market.

Contrasted with the history of milling in other parts of the world the Canadian miller has not cause to shed many tears. His lot might be worse, and his sturdy common sense, we believe, tells him so. Just how near to view the silver lining is to the present dark cloud that has hovered around, we must admit, over long, we do not know, but we are quite sure that the brighter side is there, though just now hid from view.

TWO VIEWS OF SUCCESS IN MILLING.

Two articles expressing altogether opposite views find place in recent issues of two milling cotemporaries. In one the necessity of the man who owns the mill possessing a thorough technical knowledge of milling is strongly urged. No matter how reliable or efficient may be the head miller, the argument is that perfect success in milling will not be attained unless the owner himself has a solid grasp of the processes that go to make good flour. Good flour, it is claimed, is the substrata of prosperous milling. All this may be expected from a capable head miller, but how is one to know that one's assistant is a capable man when one does not know himself from personal knowledge the elements that give efficiency in this direction?

A contrary view is taken by a writer in the April Milling, of Indianapolis, the gist of whose argument is contained in these words: "One of the necessities of the times for the miller is to be an expert in matters of buying and selling, for while he may safely depend on a reliable head miller to operate his mill economically, if the grain which he furnishes him to grind costs too much, or the price received for the product is too small to pay for the raw material with the labor spent on it, including a fair allowance for interest and depreciation from wear and tear, then, no matter how skillfully the work of reduction may be carried on the result can only be loss. Nor is it only the larger mills who require this business training. The proprietor of the country mill who is a shrewd manager in a business sense will "knock the sox" off the man who can manage the mill to a nicety, but fails to conduct its affairs in a business-like manner."

The case is one of extremes. A mill worked solely on either one plan or the other is in danger of running on the rocks. There can be little doubt that the man who embarks in any business ignorant of the general principles that govern the transacting of business is almost certain to meet with disaster. Our reference now is to a knowledge of the accepted principles of business and commerce, and not to an experimental acquaintance with the particular line of business in which one may be engaged. Bradstreets in their little brochure detailing the causes of failure in business in the United States and Canada in 1892 place lack of capital first, disaster second, and incompetence third. We may certainly employ the term as referring to incompetence in the broader sense in which we have now written, whilst it also has its application in relation to a technical acquaintance with the particular business in which one is embarked.

A shoemaker might be a successful business man, successful in the sense of knowing the shoe business well, and a shrewd, clever business man, knowing how to buy and sell, and an expert in financial management. Would he make a successful miller not knowing anything of milling? He had bought and sold the material for manufacturing boots and shoes, and had sold the manufactured product—making the turn profitable in both class of transactions. Does it follow that as a miller he would be "an expert in buying and selling," whilst depending on the head miller to operate his mill economically and handle the details of work that come only from practical experience?

Is not true success to be found only where a combination of these qualities exist? Exceptional cases can be named, where men with no knowledge of a particular line of business enter it, and make an unqualified success, but these cases are exceptional and can in no sense be taken as general in their application.

A miller needs to be a miller. A miller who is going to invest his capital in the construction of a mill, and operate it, depending on the fluctuations of commerce to give him his profits, needs also to be a business man. To give currency to any other doctrine is to invite business failure.

EDITORIAL NOTES.

TWO gentlemen from North Dakota have made a purchase of five cars of red fife wheat from a farm north of Brandon, Man. The wheat is to be used as seed by the Dakotians, and the price paid was fifty-eight cents. With freight and duty added the cost will be about $1.10 per bushel. Those Dakotians evidently know the merits of Manitoba wheat. Many of them are finding it advantageous to raise their wheat in Manitoba, as the emigration from Dakota shows. When they cannot manage to come over they are going to do the next best thing, and that is grow Manitoba wheat in Dakota. Our friend of the Buffalo Milling World has an interest in this item, likely.

JAMES MCDANIEL, head miller of the Wasburn A mill, Minneapolis, has invented a roller mill feeder that, in the judgment of those who have examined it, is likely to take a useful place among recent inventions of mill machinery. He has taken, as a foundation principle, the idea that material will run most freely and easily through a feeder constructed in the shape of an inverted hopper, and uses feed rollers having corrugations considerably coarser than are usually employed. With the feeder frame small at the top and wide at the bottom, there is no chance for the material to get hung up, and the claim is made that it comes to the rolls freely and continuously. The device can be used either as an automatic or positive feeder. Giving a roller mill a small top, as this feeder does, makes quite a difference in the amount of light admitted on a crowded grinding floor.

GLASGOW millers are complaining that from time to time they receive shipments of flour from this side of the Atlantic that are tainted with oil and other odoriferous substances. It is said by some that this trouble arises through carlessness on the part of the steamship companies in unloading the flour on wharves that had previously been occupied by oil in leaking barrels. The American Miller, commenting on the circumstance, says: "If carriers are not disposed to foster the trade by giving flour careful attention after arrival, the receivers and shippers should join hands, and by united action compel them to provide special facilities for handling flour. Portable platforms to be used exclusively for stacking flour can be provided without great expense, and used with no inconvenience. This would prevent flour from becoming tainted as reported, and is the least precaution that can be asked."

NOTHING is to be wanting at the World's Fair. Every nationality, every institution, every interest, is to be represented and to have its own day, week and particular celebration. We understand that the last week in June is to be millers week and a public meeting in one of the large halls is being planned for that day. Canadian millers may find it profitable to note this fact. Though one were to start in on the day of opening and remain there until the valedictory of the officials was read and the fair closed, they would not have seen everything. With those whose time is limited to a week or perhaps a fortnight the important matter is to first see and study carefully those things in which one is most immediately interested. The Fair will not have fulfilled its purpose with the individual visitor unless he comes away having learned something of profit that he did not know before reaching Chicago. Milling affairs will be the matter of immediate interest to the miller.

APPRECIATING the serious results and losses that have resulted in the past from the growing of wheat from smutty seed, the grain men and farmers of the northwest are doing what they can to educate all concerned into the importance of thoroughly cleaning all suspicious seed grain before it is sown. We notice a recent letter on the subject from Supt. Mackay, of Indian Head experimental farm, in which he shows from tests made with seed wheat treated for smuttiness and that untreated, the genuine advantage that comes from treating the wheat with some reliable mixture. Mr. Mackay, as an old and skilled Ontario farmer, knows the importance of raising good clean wheat. According to Prof. Saunders, through experiments carried on at the various experimental farms, smut yields to the treatment with bluestone more readily and effectively, perhaps, than in any other way. Every miller is interested in seeing that only wheat of good quality, and always clean, comes on the market.

The oldest specimen of Indian corn known was discovered by Darwin in the soil of the coast of Peru, now eighty-five feet above the level of the ocean.

VIEWS AND INTERVIEWS.

Responsibility and Control.

Why some head millers fail, says the Roller Miller, is because they have the responsibility without control. Our neighbour is not far away from good sense. No mill proprietor will want to relegate the running of his business absolutely to another. As the one who has the money invested, and who is carrying the risk, he should keep his hand on the pulse, and know, from day to day, yes, from hour to hour, just how correctly and evenly that pulse throbs. And yet that proprietor, if he is possessed of a fair amount of horse sense, knows that he is going to get the best work out of his head miller according as he leaves him to develop his own judgment and individuality in the line where the responsibility has been placed. Nothing spoils a good man so much as constant meddling and interference. If he is the man for the place let him have your confidence, and give him good swing in the control. If he is a "duffer," then fire him.

Over Competition.

Discussing the question of competition in milling, a writer has put the matter epigrammatically thus: "It is because milling did pay that there are so many millers now, and it is because there are so many millers now that milling doesn't pay." How nicely the statement illustrates a condition universal to almost every business, and, we suppose, to every walk of life. No one knows where to draw the happy medium. A town has a boom on—a boom based likely on right and healthful conditions. But things are not allowed to remain right and healthful. Everyone wants to be in on the boom, and immediately conditions are changed and in place of progress, there is retrogression; merchants instead of making money are doing business for nothing, or losing money. One man in a town is doing a snug business. Someone thinks he is getting on too well, and starts an opposition shop. The field is divided, and both are soon eking out an existence, making a living, but doing no more. This is competition—a form of competition that is the death, not the life, of trade.

Brains in Business.

A visitor to the studio of a world-famed artist, interested and delighted with specimens of the work he saw, enquired: "And pray, what do you mix your colors with?" The simple and laconic reply was: "With brains." The undertakings of the present day with which the white matter of the cerebrum is not well mixed do not grow to any significant proportions. Even a Corbett or Sullivan relies, in the main, on skill, which is an element of brain experience, rather than mere physical power, to assure success in the ring. A writer in the Produce Trade Reporter very fitly remarks that lots of brain work is requisite to success in the grain and commission business. He says: "The firm doing a large business who would keep close to shore and avoid the breakers must see the necessity of a man whose time will be largely devoted to thinking. By no other means can a prudent and safe business be so well conducted—by no other step can the business be so well divested of the elements of risk and the hasty steps that lead to losses and errors. The average commission merchant permits himself to get too busy, and too often with labors which might be delegated to others—to cheaper help. Physical labors do not compare with brain work in the commission business no more than they do in other walks of life."

Niagara River Dry.

It will be known to comparatively few of the present generation that forty-five years ago—March 31st, 1848—the Niagara river above the falls was dry for a space of twenty-four hours. Particulars of the case are given by the late Thos. C. Street, who was engaged at the time in flour milling, and who at a later period was a member of Parliament for Niagara. The account is taken from an old record and is as follows: "About five o'clock in the morning the man having charge of my grist mill awoke me and told me that there was no water in the race and that the river was dry also. I was considerably startled at the intelligence and hurried out as soon as I could dress myself and then saw the river on the edge of which I had been born 34 years before quite dry. After a hurried breakfast I went with my youngest daughter down about three-quarters of a mile to the precipice itself over which there was so little water running that I took a pole and walking near the edge of the precipice, about one-third of the way toward Goat Island, on the American shore, I stuck the pole in a crevice of the rock and my daughter tied her pocket handkerchief firmly on the top of the pole and we returned. I then turned my view towards the river below the Falls and saw the water so shallow that immense jagged rocks stood up in such frightful manner that I shuddered when I thought of having frequently passed over them in the Maid of the Mist. I then returned home and drove from the Canada shore a half a mile above the Falls toward Goat Island. There was a great deal of talk by residents on the remarkable occurrence. My theory of the cause is that the winds had been blowing down Lake Erie, which is only about thirty feet deep, and rushing a great deal of water from it over the Falls and suddenly changed and blew this little water (comparatively speaking) up the western portion of the lake and that at this juncture the ice on Lake Erie, which had been broken up by these high winds, got jammed in the river between Buffalo and the Canada side, and formed a dam which kept back the waters of Lake Erie a whole day."

PRACTICAL MECHANICS.

By C. R. Tompkins, M. E.

SINCE the introduction of the split pulley, both of wood and iron, the removing of couplings in order to apply new ones or change old ones from one part of the shaft to another is not so frequently called for, thus removing one objection to this as well as all other styles of couplings.

The necessary hangers to support the line and the distance from centre to centre of the bearings is another important matter to be taken into consideration. It was remarked not long since, by a writer in a certain paper, that in calculating the strength of shafting, only the torsional strength should be taken into consideration. This we consider an error, from the fact that lateral strength is of as much importance and should enter into the calculations as well as torsional, from the fact that it is not always convenient to locate pulleys in close proximity with the bearings, and where such is not the case, if the shaft is deficient in lateral strength, and springs with the stress of belt, it not only loosens it and deprives it of part of its driving power, but also cramps the journals, causing extra friction upon the boxes with loss of power, and frequent heat and abrasion. It is fair, however to suppose that a shaft having sufficient torsional strength to perform certain work will also have sufficient lateral strength, provided the distance between the bearings be such that the lateral and torsional strength will be equalized.

As we have before stated, it is a safe rule to apply to all shafting, by taking three times the diameter of the shaft in inches, for the same number of feet from centre to centre of bearings. Thus, three times the diameter of a two-inch shaft is six inches, and this, taken in feet, would call for six feet from centre to centre. One of two and one-half inches would call for seven feet, and so on.

Now, as much of the power in many mills is consumed or absorbed by the lines of shafting, arising from imperfect bearings and bad lubrication, it becomes necessary that this part of the outfit should not only be selected with the same care and receive the same care and attention as any other part of the machinery. It is no uncommon thing to find at this late day, in some of the older mills, a shaft of three inches in diameter or more loaded down with pulleys of large diameter and supported upon bearings about four inches long, and groaning under this weight at a speed of perhaps not over one hundred and fifty revolutions per minute, when a shaft of two or two and one-quarter inches in diameter, if run at a proper speed, with pulleys of not more than one-half the power, so far as the shafting is concerned, and would be more appropriate; and instead of bearings four inches long, they should never be less than eight inches for shafting up to two and one-half inches. Above that size a fair rule is three times the diameter of the shaft.

Post hangers are frequently used in the place of the drop hanger, but the objection to post hangers is not so much in the style of hanger as the objection to the posts, especially where the shaft is hung overhead. In order to place the bearings the proper distance apart the posts are so numerous that they become a serious obstacle to handling the lumber or placing the machines to the best advantage. In some mills, in order to avoid this, both post and drop hangers are used; the post hangers being located at each and the drop hanger suspended from the ceiling to support the centre. This is not good practice, from the fact that those attached to the post are not materially affected by the settling of the building, while those that are suspended from the ceiling are not only affected by the settling of the building, but the shrinkage of the timbers also, and it will be found a difficult matter to keep a shaft so arranged in align. Therefore, whenever post hangers cannot be conveniently used upon all the bearings, it is better to dispense with them altogether and use the drop hanger for all bearings.

In selecting the hangers it is not only the weight of the hanger that should be taken into consideration, but the strength and convenience of adjusting the boxes is an important item, and it is not always the hanger that contains the greatest number of pounds of cast iron that is really the strongest. Probably what is known as the double-braced hanger possesses the greatest strength for the least number of pounds than any style; besides, this style of hanger has the most convenient method of adjusting the boxes in each direction, so that should the shaft get out of align by the settling of the building or shrinkage of its timbers, it is easily corrected by adjusting the boxes without disturbing the hanger.

A line of shafting is not always as easy of access as a machine standing upon the floor, consequently it is more liable to be neglected, and not as much attention is given to its proper and perfect lubrication. Among the many different devices that have been introduced from time to time for this purpose, the self-oiling box that was introduced a few years ago and at one time adopted by nearly all the leading manufacturers, was probably one of the best systems of lubrication that has been introduced. This box was provided with a reservoir below the bearing to contain the oil, which was drawn up to the journal by capillary attraction to tubes filled with cotton wick or other fibrous substance. Openings were provided at each end of the box that formed the bearings so that the oil that was drawn up through the tubes to the journal could flow back again into the reservoir to be used over again until it was worn out and become so thick that it would not flow, then the box and reservoir required cleansing and replenishing with oil, which usually occurred once in from three to four months. But the trouble with this box and no doubt one of the principal reasons why it was abandoned by most of the manufacturers, as well as many other good devices, is neglect and want of proper attention. If the box were perfectly safe for three months, the chances are it would never be looked after and cleaned in six months, unless it became dry and began to heat, when the box was not only frequently spoiled but the shaft badly cut, and the box was condemned by mill owners, and for no other reason than from their own neglect.

The glass oiler is another device that has merit in the economical use of oil, and for good lubrication, but like the self-oiling box, it needs care and attention. The principal objection to this is that the fine dust which pervades the atmosphere of all wood-working establishments, settles into everything, the glass oiler not excepted, and no matter how perfectly the flow of oil may be adjusted, the tubes are liable to become obstructed with dust and stop the flow, and before one is aware of it the journal is dry and cutting, unless the heat admonish the engineer or other person in charge of it of this fact.

Perhaps, under these conditions, the box that is now in general use is about as good as any for wood working establishments. This box is furnished with one or more moderate sized reservoirs attached to the cap and protected from the dust by hinged covers. Into these reservoirs may be packed a quantity of waste or fibrous substance to retain the oil, which gradually filters through it, and if these are replenished with oil once a day there is but little danger from heat and abrasion. —The Artizan.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

EXPORT FLOUR.

WE are pleased to be able to publish on this page a letter from Mr. David Plewes, of Liverpool, Eng.; and to say that we expect to receive each month a communication from the ex-Secretary of the Dominion Millers' Association. It is known to most of us that Mr. Plewes has been a resident of England for nearly eighteen months, occupying the position of agent for the Ontario Export Association, a combination of millers who are endeavouring to extend the market in Great Britain for Canadian flour.

Mr. Plewes' letter of this month will be profitable to Canadian millers in the review it gives of flour conditions as they exist in Great Britain to-day, contrasted with those of a year or two years ago. Conditions have changed, and as we had occasion to point out a month ago, writing of the flour trade with the West Indies, to successfully command an export trade with outside countries millers must conform to the conditions and customs that are in vogue at these points. It has been clearly shown as a result of careful investigation that in the Indies certain grades of flour are most in demand, and this flour must reach these islands packed in barrels constructed in the particular manner that the requirements of the country make necessary. It is the old story, that when in Rome we must do as they do in Rome, and millers who shrewdly grasp this idea, and act upon it, are going to do a West Indian trade.

The same rule applies, all other conditions being equal, to trade with Great Britain, or for that matter anywhere else. Mr. Plewes points out that the altered conditions of the flour trade in Great Britain to-day make necessary changes from the grades usually made eighteen to twenty months ago. We are aware that it is a hard matter to make successful sales of any grades of flour in the mother land just now, but that certain grades are quite ruled out of the market, and why this is the case, is one of the most valuable matters touched on in Mr. Plewes' letter.

WEST INDIA FLOUR TESTS.

A baker of good standing, a resident of the West Indies, has made known through Mr. Weatherston, of the Intercolonial railway, the following particulars regarding well-known brands of American flour, viz.: the White Light, Knickerbocker and St. Lawrence, which have hitherto had the call in the West Indian and South American markets, contrasted with certain brands of Canadian flour. The Canadian flour is indicated by the private marks N.W., I.C.R. and T.—the brands are withheld for obvious reasons. The report is as follows:

"Concerning the Canadian flour. I have used 10 bbls. N.W., 5 bbls. I.C.R., 5 bbls. T. As far as looks go I should choose N.W., before White Light. But when it comes to test the flour thoroughly I must confess that I prefer White Light and the reason I do so is that the White Light flour has more spring and gives a far larger loaf than N.W., and also is better in crust. As to the color I believe I should prefer N.W., the bread being in my opinion a shade whiter than White Light flour bread.

"I have also carefully tested the other flours and find they produce a whiter bread than either Knickerbocker or St. Lawrence and very nearly the same as Victorioso. As regards spring they are about equal to the above mentioned flours. Had I to choose between I.C.R. and T. I should prefer the latter, for the simple reason that it has the most spring of the three flours used, though it is in my opinion the least white.

"More or less spring means that the same quantity of flour will produce a larger loaf than another flour.

"The flour was worked up with sugar as well as hop yeast of various strengths. The latter is not in use in this colony as a rule.

"I shall test the remaining four next week, when it will be drier and may work better; still I have my doubts as fresh flour generally works better than flour that has been in the colony some time. It is not the first Canadian flour that I have used, and I must say that I should like to find out the real cause of its not being so satisfactory, as the flours look remarkably well. First, I thought it was caused by the flour not being packed tight enough in the barrels, but now I feel inclined to think the flour contains too much gluten.

"Anyhow, I shall give the remaining flour another thorough trial, and make an experiment with potato yeast."

NEWFOUNDLAND FLOUR TRADE.

The Trade Review, of St. John, Nfld., of April 8, says: "Flour is even lower than when we last issued, especially in the cheaper grades, which are twenty cents per barrel cheaper than they were in March. Spring orders are large and there is no anticipations of a rise at present." The imports of flour to this colony from Jan. 1 to April 5 were 47,787 bbls., against 22,670 bbls. for same period in 1892. Flour quotations at St. John are as follows: sup. ex. and extra, $4.40 to $5.40; supers., $4.40 to $4.30. Cornmeal, per bbl., $3.30 to $3.50. Oatmeal, $4.80 to $5.

GREAT BRITAIN.

[Special correspondence CANADIAN MILLER.]

IT is a truism: any general information that will assist the surplus flour being exported out of your Dominion, will help the home demand, as it is a certainty so long as you have a large surplus in the Dominion of breadstuffs, if this surplus is not exported somewhere, the profits on the home market will entirely cease. Hence, allow me to say, in order to command a share of the flour trade of Great Britain, some changes are necessary from the grades usually made eighteen to twenty-four months ago. All grades of flour having declined ten shillings per 280 lbs. during the year 1892 has made some grades of flour that were very saleable when the better grades were ten shillings dearer, now only saleable for feed purposes. During the years of 1890 and 1891 flour from inferior Manitoba wheat found a ready market here at fair prices, but now two things have killed the trade: (1) the flour from the poorer Manitoba wheat from harvest of 1891 made worse flour than such wheat ever made before; generally, it was very bad; (2) the higher grades now being so very cheap, lower grades are now about unsaleable. Bread bakers won't have it, and it is not suitable for cheap biscuit purposes. Therefore, my advice is, avoid this quality altogether for export. Nevertheless choice Manitoba bakers' and patents from sound No. 2 Manitoba wheat is always saleable at equivalent to Minneapolis similar grades in price, but I don't think at present those prices would enable certain Ontario millers to pay prices quoted in Toronto for Manitoba wheat.

Again, with respect to the manufacture of your own Ontario Winter wheat some changes from two years ago are desirable. (1) Your millers would secure better financial results if they quit the straight roller and 90 per cent. patents for export, the large local mills all through this country all make similar grades, from part native and part foreign wheat, at prices it is hard to compete against, getting the part of English wheat they mix in at 78c, per bushel at mill door. Very good wheat some of it is, testing 62 lbs. imperial bushel, hence it is better for the Ontario miller to go up with his export grade away above those grades, say a white 70 to 80 per cent. patent, and for this grade there is even now a fair demand for well known brands. I know one Ontario miller now who makes a choice straight and a patent as suggested above, both grades well and favorably known. Their straights have had to go into store, while they are constantly getting advance c.i.f. orders for the higher grades.

Again, with regard to your low grades it is no use sending the old low grades here, though there is a fair demand for them, but the price would only net the miller about $15 per ton at his station, clear of covering, but if you clothe your low grade reels, so as to bring up your low grade too as near an extra, for such flour, especially when from winter wheat, there is a demand for biscuit purposes.

With respect to future prices, unless something happens to growing crops in America, the enormous stocks on hand here, both wheat and flour, leaves but slight hopes of better prices.

Another all-important matter is that of marine insurance, For some years past there has been considerable damage to flour from coming into contact with chemicals and apples in transit. Several insurance companies now are offering to insure against those dangers and every other risk including three days fire insurance on landing here. Every miller had better find out and insure only in such companies; no doubt those companies have agents in Toronto. Insurance certificates covering the above can, I understand, be obtained from the secretary of the Dominion Millers' Association, Toronto, with whom millers exporting flour had better correspond.

DAVID PLEWES.

LIVERPOOL, Eng., Mar. 15, 1893.

THE FLOUR MARKET.

From what we have to say in other parts of the MILLER this month, it is very plain that there is no substantial improvement in the flour market either in Canada or at export centres. The news from the United Kingdom is still of a demoralized market. It would look as though we were making some progress in regard to West Indian trade. Just immediately this is chiefly in the direction of acquiring a better knowledge of the nature and requirements of this trade. But this is essential before the trade itself is to be acquired. Local and home trade is, of course, quiet and yet in many respects a snug business is doing. Prices continue low.

PRICES OF FLOUR AND MEALS.

Toronto: Car prices are: Flour (Toronto freights), Manitoba patents, $4.30 to $4.50; Manitoba strong bakers', $3.90 to $4.25; Ontario patents, $3.25 to $3.50; straight roller, $2.95 to $3.20; extra, $2.90 to $3; low grades per bag, $1 to $1.25. Bran—$15 to $17. Shorts—$16 to $18. The Flour and Grain Trade Bulletin of the Dominion Millers' Association reports: "Straight grades at $3.05, $3.15 and $3.25; patents, $3.20 to $3.25; 80% patents, $3.60, f.o.b. for Lower Provinces. Bran, $13 to $14; shorts, $15 per ton. Very few sales of flour or feed reported."

Montreal: Prices as follows, with a slow trade: Patent spring, $4.15 to $4.30; do. winter, $4.10 to $4.25; straight roller, $3.50 to $3.60; extra, $3 to $3.25; superfine, $2.75 to $2.90; strong bakers', $3.70 to $4.15. Meals—Granulated and rolled, per bbl., $4.10 to $4.25; do. do., per bag, $2 to $2.10; standard, per bbl, $3.95 to $4.05; do. per bag, $1.95 to $2. Car lot quotations are as follows: Bran, per ton, $15.50 to $16; shorts, per ton, $17 to $18; mouillie, per ton, $20 to $22.50.

Manitoba: Prices locally: Patents, $1.95; strong bakers', $1.75; XXXX, 75 to 95c.; superfine, 60 to 70c. per 100 lbs. Bran, $12; shorts, $14. Meals, etc.—Rolled and granulated oatmeal held at $1.90 to $2.10 per sack, according to brand, and standard meal 5 to 10c. lower, these being prices to retail traders. Cornmeal, $1.65 to $1.70 per 100 lbs. Split peas, $2.60 to $2.65 per 100 lbs. Beans, $2 to $2.25 per bushel. Pot barley, $2.50 per 100 lbs. Pearl barley, $4.

A CASE OF FRAUD.

Complaint is made by Ontario millers that American flour is getting into the lower provinces notwithstanding the duty of 50c. per bbl., which is supposed to be prohibitory. The trick is to ship the low grade flour as feed, and after it has passed the customs, to then sell it as low grade flour. A United States milling journal endeavors to explain away the fraud by saying: "The fact is that the lower grades of American flour have been unprecedentedly cheap; and there has been no occasion for the fraud which has been alleged, of shipping in low grade flour and getting it through to customers as feed. Some of the flour has been as cheap as feed need be." This is plausible, perhaps, and we would rather believe that no fraud had been perpetrated. One of the complainants, however, is Mr. James Goldie, of Guelph, who has for years been a large shipper to the Maritime provinces. There can be little doubt that when he makes a charge of this kind it is based on reliable data.

Office of the CANADIAN MILLER,
April 15, 1893.

THE GENERAL SURVEY.

NOTHING very remarkable can be written of the market situation as it has shaped itself, more or less variously, during the month. There have been some variations in prices, but not of a kind to alter in any substantial or fixed manner the situation as it has existed for some months. True there was a big drop in the Chicago wheat market on March 29th, when the leading option slumped from 82¾ to 75¾, only a few minutes being required to make the break. This hit some operators hard, especially those interested in May wheat, but conditions soon recovered themselves and have since held the average of equanimity that has been the feature of the market of late.

In a single word prices continue low. It is thought that there are some signs of improvement, the United States crop report for April strengthening the bullish element. This opinion is shared in a measure by operators in our own province who think that there is a prospect of better prices in the future.

Information regarding the growing crop, as it will come to us, for the next few months, will have much to do with influencing present business and regulating prices. It is believed that in certain parts of our own province the unusually severe winter has caused sufficient damage to make it more than likely that the crop of wheat in Ontario for 1893 will come short of that of a year ago. Similar causes, combined with a late spring, will, in the judgment of some, render probable a lighter crop in the United States than that of last year. We may, however, bide events; as the season advances, we can on this hemisphere generate heat sufficiently rapid to overcome in some measure at any rate the drawbacks of an unfavorable winter or late spring.

A Dornbusch report published recently by the London Times stated that in India the "unseasonable rainy period" was passing away and from what could be gathered the wheat crop had "suffered badly." A less auspicious summer's outlook, however, it is thought, may render the Indian crop prospects somewhat doubtful.

The latest reports of the past season in eastern European Russia and Asiatic Russia are very incomplete, but, as far as they go, point to a winter of great rigor. The Romanian official Bulletino Mensuale for February and the journal Das Wetter publish the minimum temperatures of last January in these regions, among which are 32.8 degrees below zero at Moscow, 38.2 below at Ekaterineberg, 49 below at Barnaul and 50.8 below at Tomsk, the intensity of the cold increasing as we go eastward from Moscow. It appears that all Asia has passed through an abnormally severe season, which prima facie is not favorable for agriculture. But the Asiatic climate can turn wonderful somersaults in a few weeks, and, possibly, the coming summer may make very large amends for any temperature-delinquencies of the past winter.

Turning the eye southward from Moscow to the Black Sea region and also westward over Germany, Holland, Belgium, France and even Great Britain, the agricultural prospect brightens unmistakably. It has recently been reported by Dornbusch that "the agricultural situation in the Danube provinces on the whole is favorable, and Russian fields promise fair to full results." The latest temperature returns from western Europe appear to very greatly strengthen these hopeful anticipations.

Present data is insufficient to enable anyone to say what the harvest will be—taking the world throughout. We may, however, study with interest the information that is already available, and closely keep in touch with the varying conditions of the next few months.

CURRENT PRICES OF BREADSTUFFS.

WHEAT.—Toronto: (West and north points)—White 66 to 70c.; spring 62 to 63c.; red winter 66 to 70c.; goose 61 to 62c.; spring, Midland, 63 to 65c.; No. 1 hard, North Bay, 84 to 85c.; No. 2 hard 82 to 83c.; No. 3 hard 74½ to 75c.; No. 1 frosted 65 to 66c. Montreal: No. 2 hard Manitoba 82 to 83c.; No. 3 76 to 78c. Chicago: April 75½c.; May 76½ to 77c.; July 73¾c. St. Louis: April 64½c.; May 69⅜ to 69½c.; July, 69⅞c.; August, 69⅞c. Duluth: No. 1 hard 65½c. for April; May 69½c.; July, 72½c.; No. 1 northern, 63c. for April; 66¼ for May; 69¾ for July. Beerbohm, April 17, says: Floating cargoes—Wheat, slow. Cargoes on passage—Wheat, downward tendency. Mark Lane: Wheat firm, English turn easier; flour, quiet, steady, spot. No. 1 California wheat, off coast, 3d. lower; Australian, off coast, and present and following month, 3d. lower; Walla, off coast, and present and following month, 3d. lower. London: No. 1 California, prompt and nearly due, 3d. lower. French country markets firm. Liverpool: spot wheat, cheaper to sell; wheat, ½d. to 1d. cheaper. On passage to United Kingdom—Wheat, 3,641,000 qrs.; corn, 465,000 qrs; to continent—wheat, 1,116,000 qrs.; corn, 251,000 qrs. Wheat area in India has increased 2,750,000 acres, but the yield is disappointing.

BARLEY—Toronto: Outside No. 1, 43 to 44c.; No. 2, 39½ to 40c.; No. 3 extra, 36 to 37c.; No. 3, 32 to 34c.; two rowed, 54 lbs., averaging about No. 3, extra in color (outside) 35 to 40c. Montreal; for feed, 40 to 42c.; for malting, 52 to 55c. A Buffalo despatch of April 17, says: "The visible supply of barley at principal points of accumulation is 807,000 bush., the decrease for the week being only about 30,000 bush. Stocks are about 1,700 bush. in excess of last year. At Buffalo—1,225,089 bush. in store, decrease for the week of 65,560 bush. The supply to-day exceeds that of last year at this date by 46,775 bush. The market in Buffalo is dull with offerings of spot very light. Quoted: No. 3 extra western, 68c.; No. 3, 64c., No. 4, 50 to 58c.; No. 1 Canada, 78c.; No. 2, 75c.; No. 3 extra, 73c. At Oswego: Stocks in store show considerable increase; 13,133 bush. of Port Hope barley arrived and the shipments out were 5,000 bush.; stocks on hand, 73,163 bush.; market is nominally unchanged; Canada, 71 to 79c. At New York: stocks are depleted, only 15,569 bush. in sight. The market continues firm, with fair local enquiry and some export movement. Canada quoted to arrive, 84 to 92c. At Albany; The market is firm, with little trading; choice state and western, 73 to 80c.; Canada, 78 to 85c. At Milwaukee: Stocks are slightly increased, there being 157,444 bush in sight, as compared with 105,925 last week Monday. The market is steady rather; dull, and No. 2 in store is ½c. higher than Saturday; quoted at 65c.; sample lots, 30 to 59c. At St. Louis: No market. At Chicago: Market nominal; No. 2 quoted at 62c."

OATS.—Toronto: Improved demand; 32½ and 33c. on track; white offered at 30c. Montreal; per 34 lbs., 34 to 35c.; Buffalo: No. 2 white, 38¾ to 39c.; No. 3 white, 38c.; No. 2 mixed, 33½ to 34c.; No. 2 white, clipped, 40c. Oswego: Extra No. 1 white, 43c.

PEAS.—Toronto: Steadier and improved demand; small lots, west, 57c. Montreal: per 66 lbs, 73 to 74c.

RYE.—Toronto: Hardly any offering; wanted at 54c. Montreal: 60 to 62c.

BUCKWHEAT.—Toronto: Dull and weaker, 47c. outside.

TRANSPORTATION TOPICS.

Over 1,000,000,000 bus, of grain have been contracted at Chicago for shipment by rail from Buffalo on the basis of 6c. wheat, 5¾c. corn and oats 4c. to New York.

The Montreal Transportation Co. will locate a floating elevator at Prescott this summer. The company must do this, in order to compete with Ogdensburg, as vessels will carry grain for the same rate from Fort William and the lakes to either place.

FLOUR IN CHINA.

The First Assistant Secretary of State, in response to a request of the millers of Oregon and Washington has intimated his willingness to appoint a special agent for China to promote the flour trade with that country. The millers of these states have already done a fair trade with China. Canadian flour is known in China, through the enterprise of Mr. W.W. Ogilvie, and what is to prevent Canadian millers from securing and holding a good trade in the Celestial Empire?

PERSONAL.

George Kent, of Minneapolis, has become head grinder in the Ogilvie Mill, Winnipeg, Man.

E. K. Bruce died in Chicago a fortnight since, aged 68. Mr. Bruce was long known as the "Corn King."

PUBLICATIONS.

The publishers of The Canadian Hardware Merchant have issued a spring trade number, which, viewed either typographically or editorially, will compare most favorably with any of the special numbers of trade journals published at home or abroad. Especially to those interested in the hardware business the seventy-two pages of this number should prove exceedingly valuable. The editorial departments give every evidence that the editor is in close touch with the requirements of the trade; whilst the illustrations and many of the contributed articles enable one in almost any business to read the number with interest and profit.

TRADE NOTES.

Mr. F. E. Gaudrie, of Pt. Hope, Ont., has recently ha patented a labelling machine, which is said to be perfection itself. It labels all kinds of preserving cans such as those used for tomatoes, corn, peas, salmon, lobsters, etc., at the rate of 100 a minute. It is made to go either by hand or power and a child ten years of age can easily run it. It is patented in the United States and Canada, and patents are being secured for England, France and Germany. Mr. Alonzo W. Spooner, of Pt. Hope, who usually knows a good thing when he sees it, has secured control of this machine for Canada and all orders will be supplied by him from Pt. Hope.

BANANA LOAVES.

AN exchange discusses the banana-flour question in these terms: "There need be no dread of a famine in this country as long as there are bananas in Central America. Alexander von Humboldt said once, after examining the capabilities of the banana, that a single section of Central America could feed the world with a farinaceous food not inferior in quality to the best grain, and that there is some truth in this statement seems clear from the fact that bananas are now being made into flour and shipped to the United States and Europe. When we are threatened with famine therefore, we can fall back on the banana, but until then we do not believe that banana flour, although it is said to make excellent bread and cakes, will take the place of wheat and flour, at least among the North Americans."—Hardly.

IMPARTING FLAVOR TO FLOUR.

A well-known English expert in milling has recently been investigating the subject of flavor in flour, and has pointed out what has, indeed been ever palpable enough, that the extraordinary property in flour for absorbing the scent or flavor generally of any substance placed near or in contact with it, suggests a means whereby the baker might readily improve bread and render it more generally attractive. Every baker now and then has the unpleasant experience of flour being virtually spoiled by absorption of some disagreeable odor. Thus flour placed near lime, or oil, or tar contracts a fatal flavor and is practically ruined. Why should not the baker, however, endeavor to turn this extraordinary property to good account, and impart to his flour flavors which would make the resultant bread quite a rival to articles on well-to-do tables where at present the loaf is really out of the dietetic running. The miller at present does the blending for the baker, and too often from a miller's point of pecuniary view, but if the baker could once master the art of imparting attractive flavor to flour, and so producing bread that would be distinctly nice, and yet wholly free from aught that is mawkish or cloying, it is evident that very much would be gained. At present, as we are well aware, this is a thing quite in its infancy; it is still in the experimental stage, but it is really open to any baker to apply the principle himself, and by testing his art on a small scale he might easily discover the way to greatly raise the value of bread made from flour that under ordinary conditions yields only a dry loaf attractive to the eye, but by no means tempting to any one who does not happen to be hungry.

NOTES AND QUERIES

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column. Correspondents need not give their own name for publication, but it must be made known to the editor. Anonymous communications will find space in the waste basket.

No. 33. REBABBITING ROLL BEARINGS.—I am troubled in regard to worn out roll bearings. Can some reader suggest a plan that experience has shown him to be worth the cost and labor of rebabbiting? Arthur R.

No. 34. BOILER EXPLOSIONS.—Let me say, suggested by a correspondent in the March MILLER, that the amount of water in a boiler at the time it "let go" has a good deal to do with the possibility of an explosion. When a considerable quantity of water is heated under pressure, as in a boiler, and suddenly released from pressure, as in case of an explosion, or rupture of the containing vessel, then the body of water is instantly flashed into steam and the sudden increase in volume which takes place when that happens makes matters much worse than when there is but little water contained in the boiler, and the destruction is only that which is caused by the escape of the pent-up body of steam therein contained. In the latter case, the mischief is all done at once and is over with; in the former case, the destructive energy is reinforced by a power two or three or perhaps many more times greater than that which caused the initial trouble. L. A. R.

No. 35. SIEVE AND GRAVITY PURIFIERS.—A correspondent of Milling, Liverpool, Eng., asks: "Are we returning to the methods of ten years ago? Is the gravity purifier in a slightly modified form to re-assert its place in the affections of millers? We scarcely think so. To our minds the sieve form is so immeasurably superior to any gravity in principle as well as in detail and capacity that we imagine such a return to be impossible. But it is not a strange fact in connection with the history of milling machinery, that whilst we were using gravity purifiers, and our milling engineers, with a few notable exceptions, were saying that nothing else would do the work of purifying semolina and coarse middlings as well, the Americans were using the sieve type with excellent results. Now when English inventors have made the sieve purifier so nearly perfect that it has almost entirely superseded the gravity, the Americans have reverted to a very questionable modification of that type, and claim for it, that it is the most perfect thing yet invented—and that it will, and is, rapidly superseding all other purifiers."

No. 36. THE TERM HORSE POWER.—A writer in Power thinks that an imperfect understanding of the term horse power exists in more minds than that of the engineer who tried to get at his "horse power per hour" by multiplying the actual horse power by sixty. The horse power is foot pounds per minute, just the same as revolutions per minute, and it is just as meaningless to say "horse power per hour" as it would be to say "revolutions per minute per hour." The horse power is the unit of the rate of power consumption, and whether the number of foot pounds be divided by 550 per second, 33,000 per minute or 1,980,000 per hour, the rate of their production, or consumption and consequently the horse power, will be the same. When it is said, for instance, that an engine requires thirty pounds of steam per horse power per hour, it is meant that thirty pounds of steam are required per hour, or one-half pound per minute for each horse power developed.

PERFORATED BELTS.

AN engineer has been enquiring of us as to the value of belts perforated with holes. The argument of the dealer is, that the air is let out through these holes from under the belt, and being thus excluded, atmospheric pressure must be excluded, and the pressure of the atmosphere upon the pulley will help to secure a firmer grip without further tightening. This is on the supposition that the air is carried under the belt in the rush of the belt on the pulley. This engineer does not want to pay for perforated belts if they do not do what is claimed for them, and yet he wants all the adhesion he can get with the least tightening. We do not believe that atmospheric pressure has anything to do with the driving of belts, and has no part in causing them to adhere to a pulley, whether perforated or not. It has been found that at high speed belts do not adhere so well to pulleys as at a slower speed, and this has been claimed due to the air getting between the belt and pulley at the high speed and preventing less adhesion from atmospheric pressure. It can be quite clearly demonstrated that the centrifugal force of the more rapidly moving belt counteracts to some degree the adhesion of the belt and causes it to adhere so firmly. This is the cause of this peculiarity, not the taking of air under the belt.

FOREIGN LETTER BOX.

ENGLAND.

BUSINESS with the miller does not grow more roseate in British markets. Stagnation that has reigned supreme for many months continues. Stocks retain an average volume with buyers no ways anxious to buy heavily. Flour at auction is not an unusual announcement to meet one in these days of depression. Recently a lot of California flour was placed on the Liverpool market to come under the auctioneer's hammer. Word has reached Liverpool that the bark Beemah, Captain Puxley, from Astoria, Ore., with 33,000 bags of flour for Messrs. Wade, of Galway, is ashore at Mutton island, Galway bay, and will become a total wreck.

BUDAPEST.

The home of progressive milling has not fared better than other parts of the world as its days increase. Hungarian millers have recently been meeting in conference to consider what can be done to secure some of their old-time trade from the United Kingdom, which American competition has of late cut into. A reduction of freight rates was secured from the "Adria" Navigation Co. on condition that this line secure the lion's share of the trade. Will so slight a concession meet the contingency? In the Austrian reichsrath (house of commons) there was again an angry debate about the sharp competition between Hungarian and Austrian millers. Some Bohemian deputies wished the minister to check the continual and very large imports of Hungarian flour, in order to protect the Austrian millers, who complain that they are deprived of their means of livlihood by Hungary's all-powerful competition. The minister replied that he was unable to protect home trade any more than he already did; that Hungary was quite as great a customer for drygoods and other Austrian trade articles as Austria was for Hungarian flour, and, therefore, the governments must respect and defend each other's trade. The output of Budapest mills for February was 651,350 bbls., of which 337,888 remained in Hungary, 204,065 were shipped to Austria, 43,687 to England, 35,605 to Germany, 15,834 to France, and 14,271 to other countries.

RUSSIA.

The Russian government has decided that an official inspection shall be instituted on all grain exported from Russia, so that hereafter all the grain exported will have to be cleaned, and the state will exercise a strict surveillance over this measure. As Russia does not manufacture cleaning machinery, recourse will have to be made to foreign manufacturers; to this end a proposal has been made to allow such machinery to enter Russia free of duty, so that there will probably be, this year, a large demand for this class of machinery. The demand for milling machinery generally is also likely to extend, since millers in south Russia are discussing means whereby Russian grain shall be exported in the shape of flour, the advantage of which, being beneficial to the state, the government has lent its support to the project, and will aid millers in bringing about this result. The machinery exhibition which will be held in St. Petersburg in January, 1894, will have a special section for corn winnowers, trieurs, and apparatus for drying and conditioning grain. The condition of winter crops in south Russia is reported to be satisfactory.

DULUTH.

This point is likely, in the opinion of some, to divide the honors with Minneapolis of being the largest milling centre in the United States. There can be no doubt that milling here has already grown to great proportions. The Superior and Duluth mills are showing a weekly output of over 40,000 bbls. The Duluth board of trade have resolved to sell their present building and erect a new exchange building at a cost of $250,000. The Minnesota senate have passed a bill appropriating $200,000 for the erection of a 15,000,000 bu. elevator at Duluth, to be operated under the authority of the state. It is to be completed by October 1st, 1894. The cost of building will be derived from grain inspection fees.

MINNEAPOLIS.

Even under depressed conditions the output of Minneapolis mills is large, but trade is not nearly as active as it ought to be. For some time the market has been in sympathy with depressed conditions existing elsewhere. "The practice among winter wheat millers of buying spring wheat flour to blend with their own, appears to be on the increase," has been remarked by a well-known local miller, "and I think the northwest has more to apprehend from this tendency than is generally believed. You see, the winter wheat miller needs the spring flour to give his own body, and the mixture makes a very popular flour for household uses. It works easily, makes white and very fine looking bread, and is calculated to cut more of a figure than the spring wheat miller would care to see it do." The Minnesota senate has recommended for passage a bill requiring all railroads to build warehouses or elevators at grain shipping points, and have them in operation before September 1st, 1893. Crocker, Fisk & Co., one of the oldest milling firms in Minneapolis, has, much to the surprise of everyone, been obliged to suspend payment. The concern was a 1,500 barrell mill, equipped with modern machinery, and their flour has always occupied a front place.

FRICTION AND LUBRICATION.

WE often hear of the "co-efficient of friction," and no doubt many wonder what that means. It is easy to understand with a little explanation. Let us take a piece of iron and pull it along a plate of iron also. Let the block weigh 10 pounds, and we will hook an ordinary spring balance and pull it along, noting the amount of pull of the scales necessary to move it. Suppose this is 1 pound, or in other words, it takes 1 pound to pull 10 pounds on this iron plate, and we say the "co-efficient of friction" is 1-10 or 1. Now let us oil this plate and block and try it again. and we find it moves with a pull of ½ a pound, showing that we have reduced the "co-efficient of friction" to 1-20 or .05, just half of the former friction.

The friction of bearings vary with the conditions under which they run, the metals that run together, the lubrication of the bearings and the load or weight imposed upon them. For good sound shafting (turned practically true), in good, long bearings, properly lubricated and not too heavily loaded, the "co-efficient of friction" will average about .07, varying from .04 to 1. In other words it takes about 7 pounds pressure to move 100 pounds of shafting in good bearings, this will hold good for most shafts in good condition.

It will be seen that it pays to have a bearing lubricated and not allowed to run dry as the power required is often doubled or tribled by not having a shaft lubricated properly.

This does not mean that it should be spasmodically dosed with oil and then left to run until dry, for this means an uneven friction, is not economical of oil, nor is it at all mechanical. When possible have a steady regular feed, even though it be but a drop an hour, and you will be surprised to know how little oil will run a shaft and keep it cool. If you have no feeding device, then become as nearly automatic as you can yourself, by oiling "little and often." It may take a little time but it will lessen the oil required, will obviate hot journals and will be more satisfactory in every way.

THESE ARE MARKED.

THE fellow who buys, and says the flour
Is "off" 'cause the market dropped,
Has got to go;
Let us tell him so.
It's time this thing was stopped.

And the chap who orders and cancels the same
As soon as the price declines
Has got to go;
Let us tell him so,
No matter how he whines.

The foreign buyer who always kicks
And by arbitration steals
Has got to go;
Let us tell him so,
No matter how he squeals.

The miller who uses another's brands
And tries to cheat the trade
Has got to go;
Let us tell him so.
He's the meanest man that's made.

And a bill of lading which guarantees
Naught else but the shipping rate
Has got to go;
Let us have it so.
Too long we've had to wait.

And all this trouble about delay
On railway and steamship routes
Has got to go;
Let us have it so.
Thus the western miller shouts.

—Northwestern Miller.

It is not safe to judge a man by what he does on Sundays, nor a miller by his behaviour while under the master's eye.

Milling Flour & Grain

CANADA.

—Send us the news of your district.

Peter Powell will build a 100-barrel flour mill at Melita, Man.

—McCode & Co. propose to establish a flour mill at Hartney, Man.

—A farmers' elevator will probably be erected at Medora, Man.

—The Hudson Bay Co. mill at Emerson, Man., is offered for sale.

—W. X. Snider, of Eden, Ont,, is withdrawing from the milling business.

—James Cummings is adding more machinery to his flour mill, at Lyn, Ont.

The new mill of Wm. Stobart & Co., Duck Lake, Man., is now in operation.

—James Hayes, of Cobourg, Ont., has sold his mill to Mr. Pratt, a near neighbor.

—The St. Jean Grist Mill and Elevator Co., St. Jean, Man., is applying for incorporation.

—The farmers of Morris, Man., are thinking about erecting a flour mill on a joint stock basis.

—W. H. Hill, Sarnia, Ont., loses about $8,000 through damage by fire to his large grist mill.

—At a meeting held recently at Brandon, Man., the question of erecting a farmers' elevator was considered.

—Rumor has it that W. C. Caldwell, M.P.P. for Lanark, Ont., will ereet a large elevator at Virden, Man.

—A powerful electric motor for grain elevating purposes has been placed in the flour mill of T. Martin, Ottawa, Ont.

—New improvements and machinery to the extent of $40,000, are being placed in Ogilvie's large mill, at Winnipeg, Man.

—The Montreal mills of the Aylmer Company have been shut down for a short time owing to the water being out of the canal for repairs.

—The Port Stanley Milling Company is being incorporated at Port Stanley, Ont., with a capital stock of $50,000, to erect a flour mill at that place.

The mill dam at Gorrie, Ont., was swept away by a flood on the 12th inst., causing a loss of about $1,500 to Wm. Dane, Sr., owner of the flour mill.

—D. R. Ross, of Embro, Ont., experienced some trouble and damage a fortnight ago through the water of the Thames, in that locality, overflowing its banks.

—The mill of the Lake of the Woods, at Keewatin, Ont., has been closed down for a fortnight to allow of improvements, including the putting in of new water mills.

—Thos. Moran, Mayor of Bryson, Que., has purchased the grist mill at that place, and intends putting in a first-class roller system having a capacity of 75 barrels per day.

—With the recent additions of new machinery made to the Chaudiere mill, of the McKay Milling Co., Ottawa, Ont., the capacity of the mill will be 500 barrels per day.

—At a public meeting held at Elkhorn, Man., two weeks since, a large majority of residents in the district expressed themselves in favor of bonusing a flour mill to the amount of $5,000.

—A Montreal despatch of a week ago says an offer was made on the floor of the corn exchange of 70c. for 50,000 bushles of No. 2 hard wheat, May, afloat at Fort William, which was refused.

—The new roller mill at Whitewood, Assa., has been completed and is now in operation. The main building is 48 x 30, and 50 feet high and comprises four stories and an attic. The engine room is 20 x 30.

—E. S. Edmondson, who is well known to Ontario millers, runs a large bakery in Oshawa, with the large output of some 5,000 loaves weekly, which is distributed in Oshawa, Whitby and other places.

—There are four flour mills in the Edmonton district, Alberta, within an area of eighteen miles square. The Edmonton Milling Company's new roller mill, with a capacity of 75 barrels of flour a day, in South Edmonton; the others are old style mills; Fraser & Company's steam grist mill in Edmonton, with two run of stones; Hutton & Bull's steam grist mill, St. Albert, with two run of stones; and the Sturgeon River Milling Co.'s water mill on Sturgeon river, with two run of stones.

—A grist mill is being built at Burnaby, Ont., by W. A. Kermord.

—R. L. Twiedie, flour and feed, Grand Valley, Ont., has sold out.

—Selkirk, Ont., has subscribed a bonus of $1,000 towards the erection of a roller flour mill.

—Hon. Mr. Carling is given as authority for the statement that two-rowed barley could be grown with success in Canada and sold in England providing the season here was favorable. The past two seasons were unfavorable.

—The large brick flour mill and contents, and storehouse and contents belonging to Neil McCahill & Co., Forest, Ont., were consumed by fire on the 6th inst. Among the contents of the storehouse were 600 barrels of flour.

—The Edmonton Agricultural Society is taking steps to improve the quality of seed grain in that district, and has ordered 500 bushels of red fyfe from the Canadian Pacific Railway for farmers who desire to make a change.

—C. A. Zavitz, of the Ontario Agricultural College, is now in Chicago putting up the farm exhibit. The exhibit contains about 500 varieties of grain, shown in chaff and straw, all of which has been grown upon the Model Farm.

—It is expected that the proposed farmers' elevator at Melita, Man., will materialize this summer. The proposed capital is $25,000 in 1,000 shares of $25 each and it is proposed to build an elevator of 25,000 to 40,000 bushels capacity.

—Wakeford Bros.' grist mill at Battersea, Ont., was laid in ruins by fire. The mill was worked hard, and overheating is supposed to have created the conflagration. The loss is $10,000, and insurance $2,300. The Wakefords bought the mill only a year ago, greatly improving it.

—The people of Hamiota, Man., are anxious to see a flour mill built in the district. At a public meeting held recently the feeling went to show that if a responsible party would put up and operate a two hundred barrel mill the municipality would give a bonus of $10,000 and exemption from taxes for twenty years.

—A movement has been inaugurated in the board of trade, Montreal, Que., for the formation of a board similar to the Chicago board, so that grain men can deal on the spot instead of through Chicago or New York. Some of the members object to such a board on account of the facilities it will afford for gambling in futures.

—Two windmills have arrived from Chicago, says the Edmonton Bulletin, addressed respectively to Rev. Pere Husson, St. Augustine mission, Smoky river (Peace river), and the other for Rev. Pere Foussard, St. Henri mission, Fort Vermillion, Peace river. They are made in Chicago, and are for use in running small grist mills at the two far northern mission stations mentioned, where farms are being established.

—A sad accident occurred in the flour mill of G. Carter, Son & Co., St. Mary's, Ont., on 12th inst., which resulted in the death of Wm. Sinkens, Jr. The boy, a lad of 18 years, was working in the mill, and in passing a revolving shaft his clothes caught in it, instantly throwing him off his feet and winding him rapidly around the shaft. He was instantly killed, being fearfully bruised about the head.

—A small sample of wheat grown in the Peace river country, has been creating considerable attention among the members of the Grain Exchange, Winnipeg, Man. The grain grades No. 1 hard, is very large and plump, of a good color and is as good for milling as anything grown in this province. The sample is from the exhibit which is being sent to the World's Fair and was grown by the Rev. Gough Brick, of Shaftesbury Mission, which is situated at the confluence of Smoky and Peace rivers. The seed was sown on May 2nd and the grain was harvested on August 29th. The yield was thirty-four bushels per acre and the weight, government test, sixty-four lbs. per bushel. Shaftesbury Mission is just 200 miles north of Edmonton.

—The annual general meeting of the shareholders of the Patrons' Elevator, Milling and Supply Co., (Ltd.), of Boissevain, Man., was held recently. The report of grain handled showed that the elevator had taken in over 70,000 bushels since its opening on the 8th of last November, while the financial statements showed that the earnings of the elevator had been sufficiently above the expenses to enable the directors to show a profit of over six and one-half per cent., which amount has been added to the capital of the company. The following resolution was passed: "That we, as shareholders, having received thorough explanations of the workings of the elevator, and the business of the company, hereby express our complete satisfaction with the profit declared, and the benefits derived from our elevator up to the present time, and tender our hearty thanks to the directors for the way in which they have managed our affairs." The same directors were re-elected for another year.

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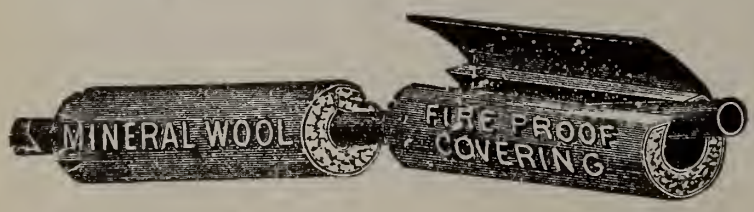

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FOR SALE.

THE "PIONEER MILLS," ST. THOMAS, Ont., will be offered for sale at the City Hall in that city, at 12 o'clock noon, on Wednesday, March 29th, 1893. This mill is fitted for both cornmeal and flour, and the machinery is in good repair. There is a good gristing trade in the immediate vicinity, and a pushing man with small capital can do a good business from the start. For further particulars apply to

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IN OSHAWA

THE UNDERSIGNED ASSIGNEE OF THE estate of W. E. Ellis & Company will offer for Sale by Public Auction at the premises in the Town of Oshawa, on

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at Twelve o'clock, noon, the following valuable property, all and singular, that certain parcel or tract of land situate, lying and being in the Town of Oshawa, in the County of Ontario, and being composed of that part of Lots Eleven and Twelve in the Second Concession of the Township of Whitby, being the property known as The Oshawa Mill (formerly the J. B. Warren Mill), together with all the Machinery, Implements and Fixtures thereon, situate and forming part of and in use in connection with the mill as described in a deed of said property from Mary and John Northwood to W. E. Ellis, dated on or about the first day of December, 1891.

Upon the said property is erected a grist mill having a capacity of one hundred and twenty-five barrels of flour per day run by never-failing water power, and fitted up with the best roller process machinery, all in good running order and constantly running. The mill is well situated, and has an excellent local trade, making a good business in itself.

The property will be sold subject to a mortgage encumbrance of seven thousand five hundred dollars, and a lease expiring on the 15th day of November, 1893.

TERMS OF SALE.

Ten per cent. cash upon the day of sale, and the balance over and above the mortgage within thirty days thereafter.

The property will be sold subject to a reserve bid.

Further particulars and conditions will be made known upon day of sale or upon application to JAMES DICKSON, Manning Arcade, Toronto, Assignee; C. A. JONES, Esq., Barrister, Oshawa; LEVI FAIRBANKS, Esq., Auctioneer, Whitby; or to DICKSON & BALLANTYNE, Manning Arcade, Toronto, Solicitors for Assignee.

— USE —
MYERS' ROYAL CATTLE SPICE

TESTIMONIAL.

DEPARTMENT OF AGRICULTURE,
ONTARIO,
Toronto, March 17th, 1893.

Gentlemen,—We have used Myers' Royal Cattle Spice during the present winter with both cattle and sheep. It seems to be equally valuable for both. I noticed especially the benefit on a lot of yearling rams. The change in their appetite and appearance was easily perceived after the first week or ten days' feeding, and they have steadily and rapidly gained since.—Yours very truly,
(Signed) JOHN DRYDEN.

Messrs. Myers & Co., Toronto.

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THOS. WALMSLEY, Treasurer

THE President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said:

"I have much pleasure in drawing your attention to the fact that this Company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

"Up to the present time the insurers with this Company have made a saving, when compared with the current exacted rates, of $91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to $21,522.72.

"Besides achieving such result, we now also have, over all liabilities—including a re-insurance reserve (based on the Government standard of 50 per cent. (50%), a cash surplus of 1.93 per cent. to the amount of risk in force.

"Such results emphasize more strongly than any words I could add the very gratifying position this Company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report."

The report was adopted and the retiring Directors unanimously re-elected.

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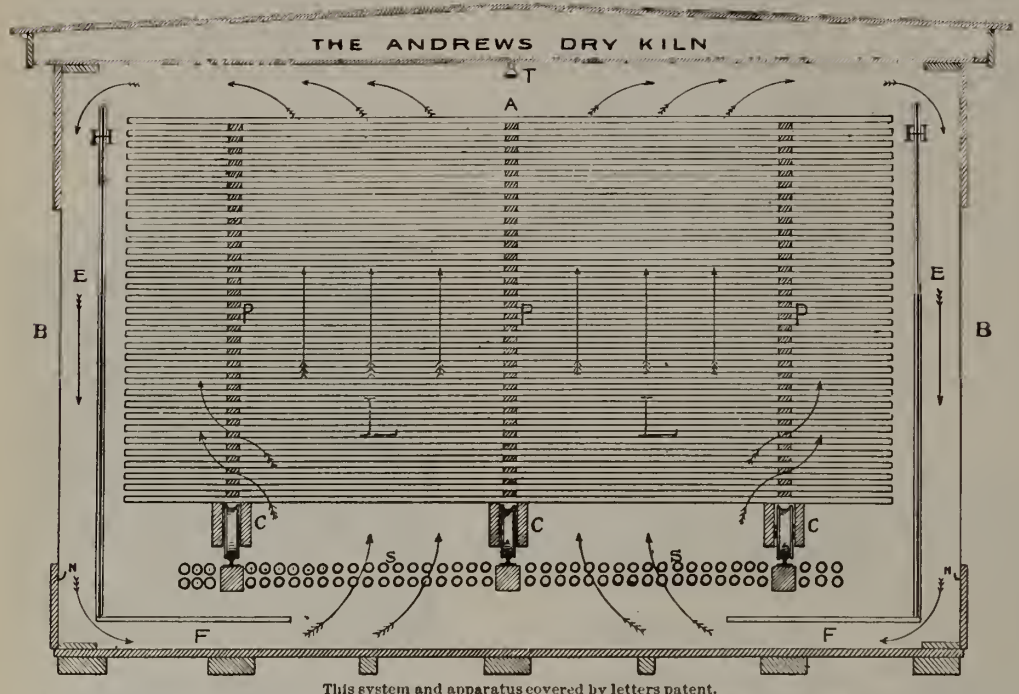

This system and apparatus covered by letters patent.

A—Drying-Room. **BB**—Brass Condensing-Walls. **CCC**—Lumber Cars. **EE**—Down Air-Flues. **FF**—Bottom Air-Flue. **HH**—Inside Walls, protecting metal from heat. **LL**—Lumber on cars. **NN**—Brass Gutters for receiving condensed moisture. **PPP**—Sticks between lumber. **SS**—Double Steam-Coils. **T**—Automatic Steam Fire-Extinguishers. Arrows show direction of currents of air.

THIS DRYER

HAS PROVED TO PURCHASERS TO DO WHAT IS GUARANTEED IN SAVING THEM MONEY IN

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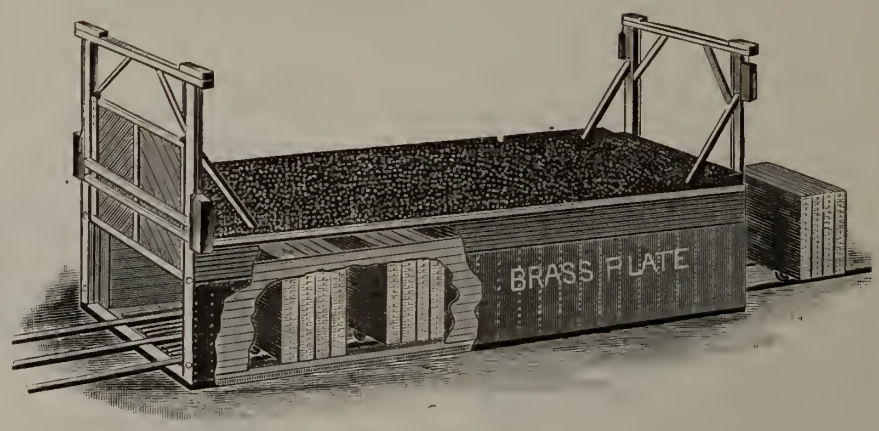

Outside View of the Andrews Progressive Kiln, showing Lumber placed crosswise the building, on cars.

'We put green Spruce in dripping with water, and in eighteen hours it was dryer than lumber that had been stuck up in the yard all summer."

This is the verdict of a Quebec lumber firm, and we can give equal results every time.

The Andrews Lumber Dryer

Has been proved to possess the following points of excellence:

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2nd. That external and internal checking and discoloration are entirely avoided by this method.

3rd. That the drying is done by a CONTINUOUS system and the temperature of the kiln is under absolute control at all times.

4th. That our Dryer is free from the varying air currents (always wasteful) incident to all fan and open-draft kilns.

5th. That our drying is done by the slow continuous movement of a large body of slightly-moistened air.

6th. That our condensing surface is so very large as to be adequate to precipitating the moisture of the saturated air with the least amount of movement.

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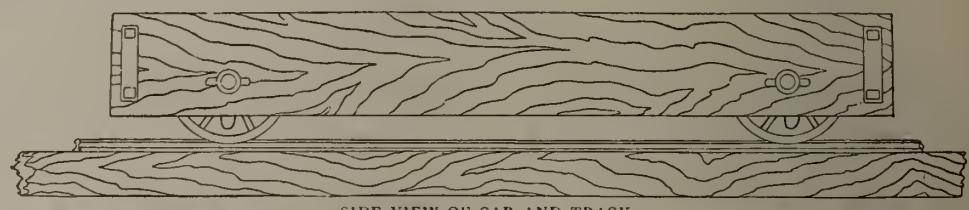
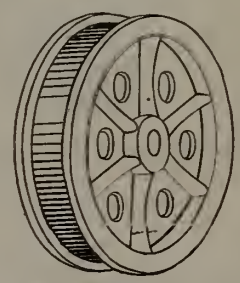


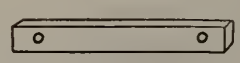
SIDE VIEW OF CAR AND TRACK.

DOUBLE FLANGE WHEEL ON SINGLE TRACK

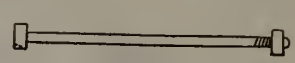


CAR WHEEL, DOUBLE FLANGE

SECTION OF CAR TRUCK, SHOWING AXLE BOX.



STRAP WASHER



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LOW GRADE
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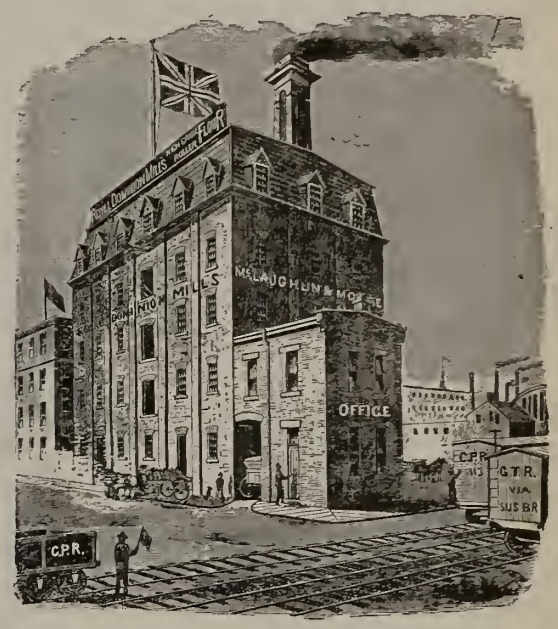

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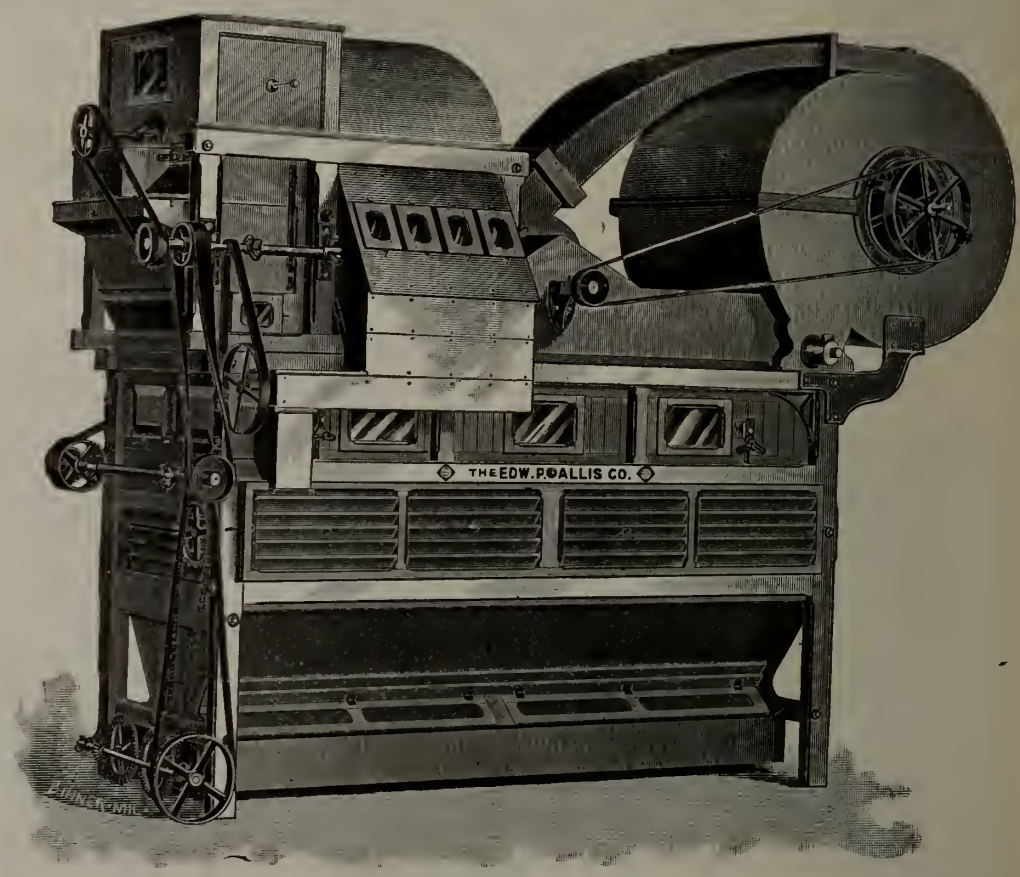
On both Smith and Allis Systems

THIS engraving shows a Reliance [sieve] Middlings Purifier surmounted on the front by Reliance Air Purifier and on the rear by a Reliance Dust Catcher, making three machines in one, all driven by one belt and using only the floor space required for the Sieve Purifier alone. The middlings, as they issue from the Grader, are introduced to the Air Purifier which removes the loose bran particles, fuzz and dust, and the middlings then pass to the Sieve Purifier, where they are graded and re-purified, and the bran specs of equal gravity to the middlings which were not removed by the Air Purifier are now removed by the combined aid of the cloth and the graduated air suction of the Sieve Purifier. The impurities from the Air Purifier and from the Sieve Purifier are discharged separately. The Air Purifier returns its own air, and draws none from the outside. The Reliance Dust Catcher discharges its own air into the room. The removal of the impurities from the middlings by the action of the Air Purifier, relieves the Sieve Purifier of the hardest work and gives it greatly increased capacity.



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TWO FAVORITE Horizontal Cleaners:

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Eureka Special Close Scouring Horizontal Smutter

Unequalled
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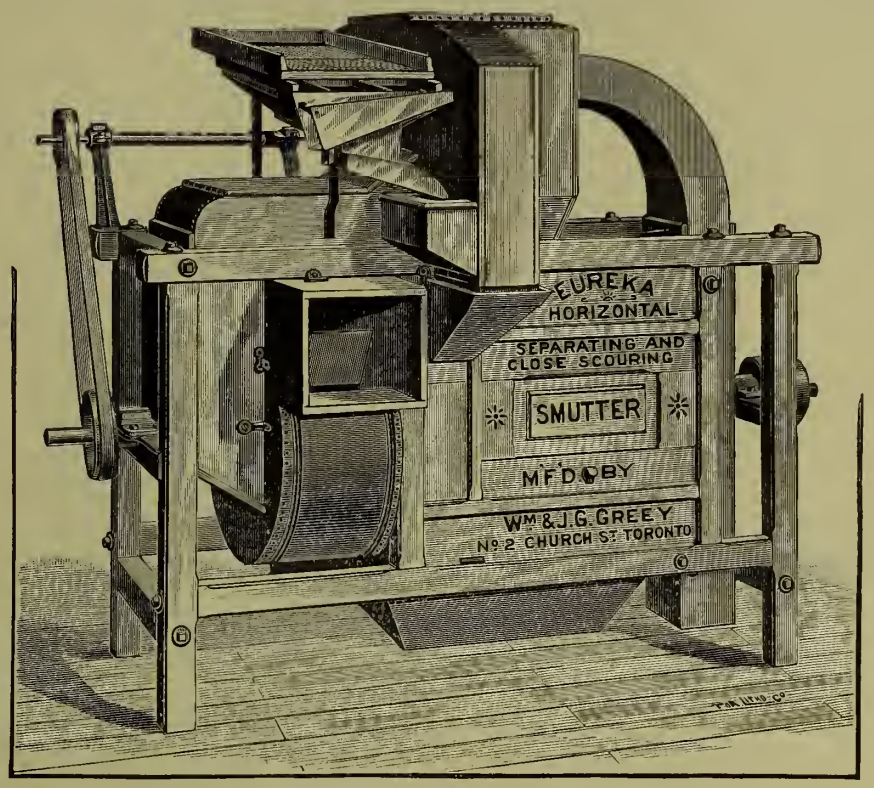
of
Dirty Wheat



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so slick and easy

PERFORMS
its work so thoroughly

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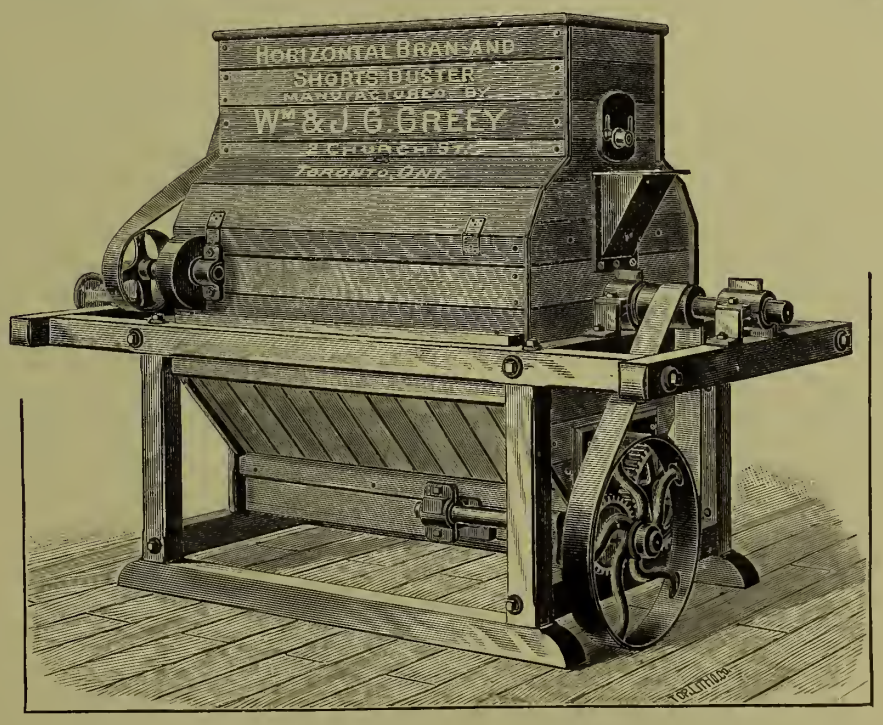

DURABLE
EFFICIENT
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MADE IN
SEVEN SIZES

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1876....	"	20.65	1886....	"	11.35
1877....	"	19.16	1887....	"	12.19
1878....	"	17.32	1888....	"	12.88
1879....	"	13.02	1889....	"	12.41
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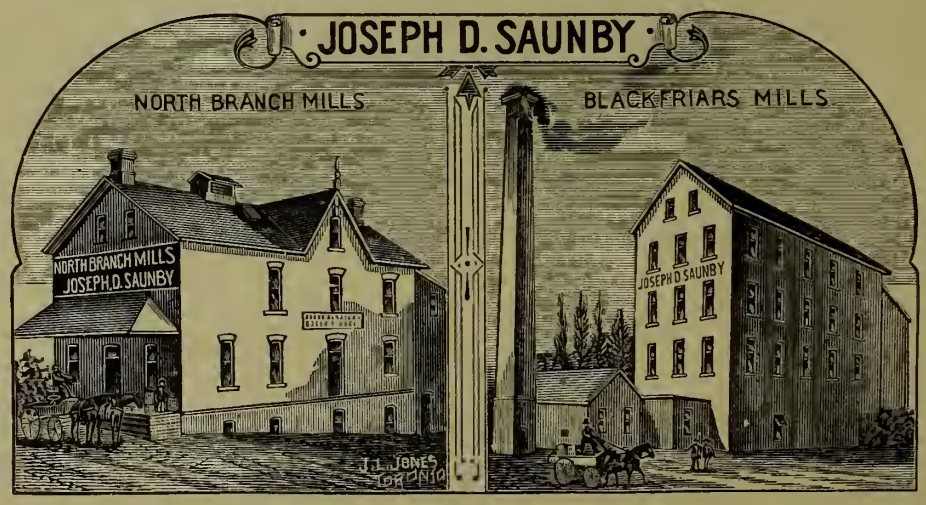

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And a man must be pretty hard up if he hasn't that much to spend every week.

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EVERY BELT GUARANTEED

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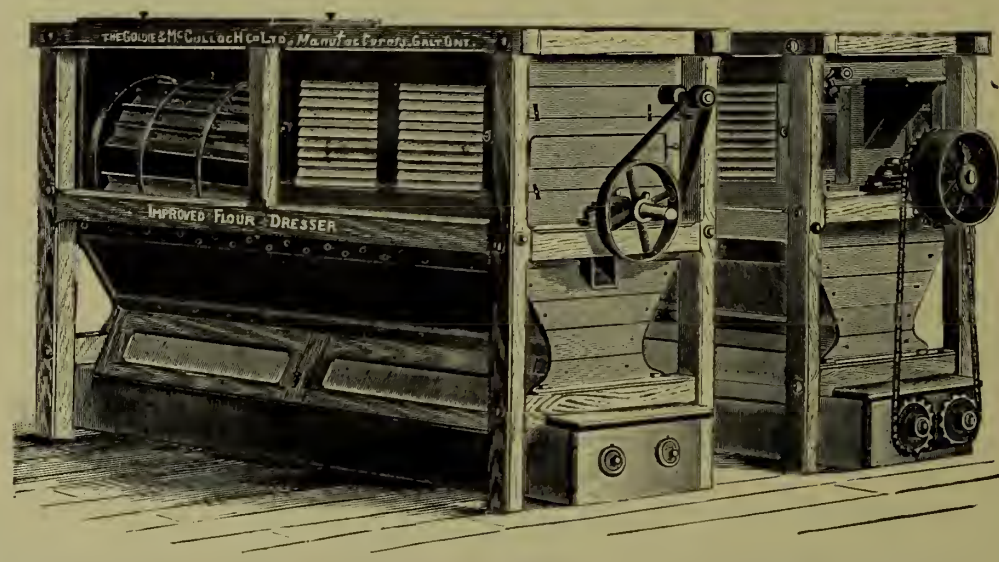
Flour Mill Machinery

Which they claim cannot be surpassed for general excellence of design, workmanship and material.

INTER-ELEVATOR FLOUR DRESSER



Manufactured by The Goldie & McCulloch Co., Ltd.

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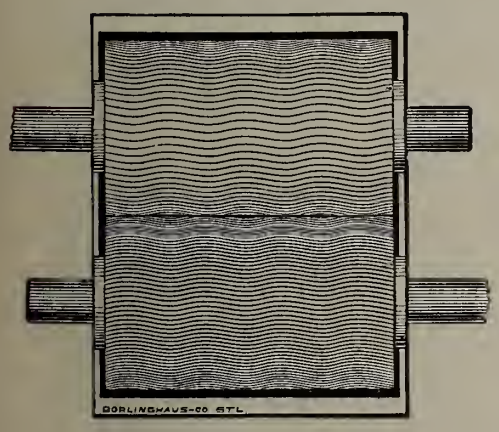

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By sending their Rolls to

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ONE-BREAK MILLING

according to the well-known system we have made so popular in the States. Send fifteen cents for catalogue and treatise on the subject. Address

DUBUQUE TURBINE & ROLLER MILL CO.,
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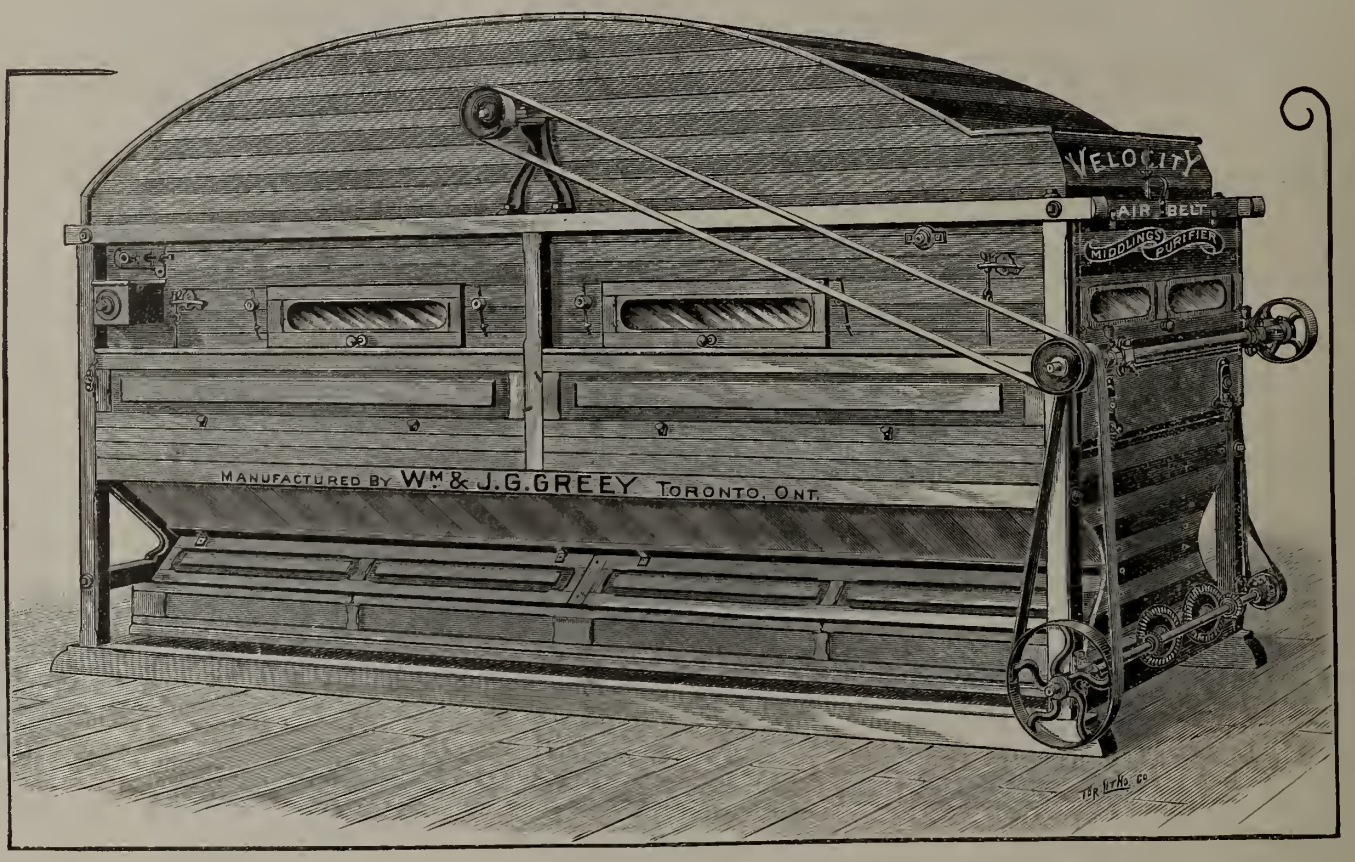
AIR BELT PURIFIERS

The Improved Velocity, with Sieve

Aspirator at head of Sieve.

Aspirator at tail of Sieve.

Transverse Brush.

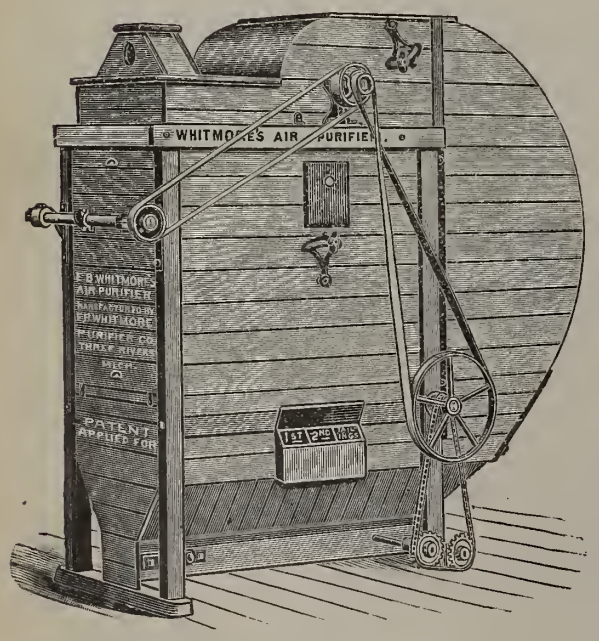


Valves regulating air currents all along Sieve.

Perfectly under control

MADE IN SIX SIZES

The Whitmore, without Sieve



No Dust No Waste
Consequently
Larger Yields

Perfect Separations

Perfect Purification

Pure Middlings
Consequently Better
Flour

Made in Three Sizes

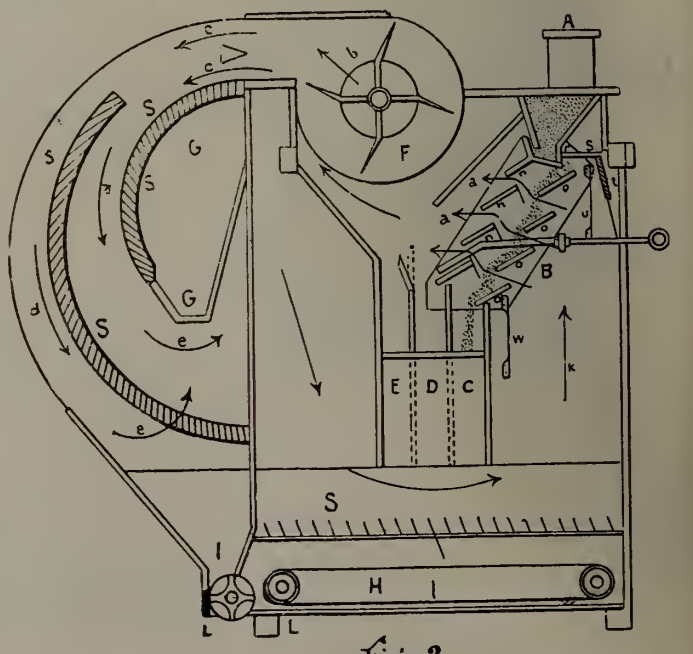


Fig. 2.

SOLE MANUFACTURERS FOR CANADA:

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THE CANADIAN MILLER

Old Series, Vol. XI. } Number 5.
New Series, Vol. III. }

TORONTO, ONT., MAY, 1893

{ Terms, $1.00 Per Year
{ Single Copies, 10 Cents

MODERN USES OF THE WINDMILL.

IN this hurly-burly age we do not give much concern to the history of the past. The mill, we are given to say, cannot grind with the water that is past, and we deal with most affairs of life on this principle. The ever-living present is with us on all occasions and it is the things of the present that chiefly engage our attention. Illustrations are not few, however, that show the importance that may be profitably attached to a study of the past. To-day is only a step that we had not taken yesterday, and to-morrow, when it arrives, will leave to-day in the past. Everything has at some time existed in embryo. Of the progress of plant life, animal life, mechanism, even that creature man, this is true.

In an age when the wondrous powers of electricity are becoming more wonderful every day few have any other thought of the windmill than of a very primitive method of creating power that has long since become obsolete. But the windmill has done much for the past and as we shall have occasion to point out further in these remarks, it has a future.

"The windmill," remarks Mr. Robert H. Thurston in an article in the Engineering News, "has helped to make a nation, has aided in the construction of the foundations of prosperity of more than one great country, and has lent picturesqueness to many a landscape which has a more serious interest for the historian and the statesman than for the artist. The "Rise of the Dutch Republic" was due to it, and the wonderful wealth and prosperity of that remarkable people came hardly less through the operation of windmills than through the exertion of their talent for commerce and manufactures. The Holland of the Middle Ages, comprised within an area of millions of acres captured from the fields of ocean and preserved against the assaults of the sea—by windmills. Without the windmill, there would have been neither country nor people to set such example to the rising nations. During the last fifty years or more this wonderful race has continued its "impoldering," and has ravished from the ocean nearly a thousand square miles of territory per year, and it has held it, largely by the aid of windmills."

In many parts of the world, as we approach the dawn of another century the windmill is an important factor in material progress. Mr. Thurston says: "Throughout Europe the windmill is still in extensive use, especially in the low countries adjacent to the mouth of the Rhine, where the writer once counted, from the car window, as the train swept rapidly across the fens, seventeen in sight at one time. In the United States, also, these inexpensive "prime motors" are used in immense numbers, especially for raising water and the minor tasks of the country districts. Mr. Alfred R. Wolff, in his excellent treatise on this subject published several years ago, gave the number which had been manufactured in a single city as above 5,000, and stated that there were hundreds of thousands in operation in this country, doing many kinds of work that may, without serious loss, be performed intermittently, such as pumping and storing water, and grinding grain on a small scale in rural districts.

"It is not known when the windmill was first invented. It is claimed by some early writers that it was known to the ancients, but it certainly was not mentioned in the famous work of Hero, in which the first steam engine is described as made two thousand years ago—the prototype of the modern steam turbine—and in which is illustrated the steam fountain, the progenitor of all the steam engines, so-called, up to the time of Newcomen. Beckmann points to the fact that windmills were not mentioned by such observing and minute chroniclers as Vitruvius, Seneca and Chrysostom. They were used in Northern Europe at the very commencement of the Middle Ages, and probably some time before. The first of the Dutch mills seem to have been mounted on floats, so that they might be turned to the wind and adjusted as required. Later, and especially in Germany, mills were mounted on posts, upon which they could swivel; and still later Dutch mills were built like those employed by our own fathers and grandfathers in America, with a movable top, which could be turned toward and away from the wind as desired, carrying the sails and shaft with it, turning about its central spindle, through which the motion of the machinery of transmission was carried down into the mill below.

"There are, according to Mr. Wolff, two principal modern types in successful use, with a number of less well-known variations upon the standard constructions. These two classes are the "side-vane" and the centrifugal

WINDMILL USED FOR THRESHING GRAIN.

[This mill is on the St. Lawrence River between Pt. Levi and Riviere du Loup. Wheels and sails can be turned in any direction to suit the wind. Power is transmitted along the shaft (the direction of which is stationary) by means of a universal joint.]

governor mills. The first had its vanes set permanently at their best angles for the best states of the weather; while their positions relatively to the thread of the current is determined by a "side-vane" which revives the pressure of the wind in such a manner as to throw the whole wheel around and away from the wind, if that should become too strong. In the other form, the blades are pivoted on axes running lengthwise, and are turned, as their speed varies, by a governor, in such manner as to have, at every instant, just that inclination to the wind which will give the desired speed of rotation. In moderate winds they are held at an angle of 60 to 80 degrees with the wind; in very high winds they fall almost into the line of its motion. Of these one is a simple and peculiarly durable machine; the other excels somewhat in excellence of regulation, though costing more for wear and tear. As compared with the steam engine and other heat motors, the power of the wind mill is small and its volume large, but it is the most economical of all known motors for many locations, and, in the aggregate, it is doing an enormous amount of work for the world, and is destined to do vastly more, we may be sure, in the future."

A modern use of wind power, the development of which we are likely to hear more of in the future is that proposed by Sir William Thompson years ago—its employment to store electric energy in "storage batteries," intermittently working with the variable winds, laying in a stock of energy to be afterward regularly and steadily given out in supplying light and power, and possibly heat as well—in short, for all the thousand-and-one purposes to which electricity is constantly finding application. For such work the fitfulness of the winds is a matter of little importance, and their variable efforts employed night and day, yield, later, a large and inexpensive store of power for transportation, as may be found desirable, and which may find use in every operation of the home and farm, or of the small industries of the cities.

A GREAT MASONRY DAM.

IN Dejeune's engineering work he says there is but one perfect great dam in the world, and he locates that in France. From his standpoint of excellence the second one has been built. It is, too, the largest masonry dam in the world. It is in India, and was built for the purpose of supplying water to Bombay. The dam is about seventy miles distant, in a northerly direction from the city, and is constructed straight across the valley of the Tansa. The length of the dam is two miles, the greatest depth 118 feet, its thickness at the bottom 100 feet, narrowing to 16 feet at the top. The two faces of the dam are of cut stone, the space between being filled with rubble stone and cement, so that the whole form one solid mass throughout. Great care was taken to reach a solid foundation that would be proof against settling and consequently dangerous strains and cracking. For this one it was found necessary to excavate nearly 7,000,000 cubic feet of rock. The true masonry work amounted to about 11,000,000 cubic feet; the sand, lime and cement to 6,000,000 cubic feet or more; so that the entire contents of the dam reaches the enormous total of 32,000,000 cubic feet. From 10,000 to 12,000 men, with a proportionate number of animals, were employed six working seasons of seven months each, so that the whole time was forty-two months, or just three and one-half years. When the basin formed by the dam is filled, it will cover an area of eight square miles, and is calculated to contain about 100,000,000,000 gallons, and to be capable of supplying 100,000,000 gallons a day the year round.

MONEY.

JOHN Stuart Mill defines it as "a mere contrivance for facilitating exchanges;" a definition followed by another British writer, Jevons, in his book, "Money and the Mechanism of Exchange." Money is defined usually as a "measure of value;" it is something by the possession or surrender of which we measure the value to us of other articles. It need not be gold or silver. In Homer's time oxen were money; the Abyssinians used salt; the natives of the west coast of Africa used sea-shells; the early settlers in Virginia used tobacco: Marco Polo says that the Chinese used paper—not paper redeemable in coin, but paper made valuable by the Great Khan's orders. So really money is anything that is generally accepted as of value, which serves to do away with trading "in kind" or barter. It makes no difference what its nature is, so long as it is something which is of value to the people at large.

Coal was first used in England as fuel in 1350.

IN the judgment of Mr. Charles Smith, proprietor of Campbellford mills, Campbellford, Ont., a correct account of the origin of fife wheat has not yet been given by any of our correspondents. "Fife wheat was brought into Canada," Mr. Smith says, "in the year 1852 or 1853 by one David Fife, of Otonabee. He was one of the old settlers of that township and about the above date he went home to the land of his birth, Scotland, on a visit. On his return he brought a little of the wheat in question. He sowed it with good results and it went by the name of Fife or Scotch wheat from that time up to the present. I knew the man well. He lived in Otonabee, near Allandale, what is now called Lang, and further particulars can no doubt be had from his son now living on the old homestead. His name is Sylvester Fife, and address Lang P.O., Otonabee. He is a son of the Davy Fife who first brought the fife wheat to Canada. The Dr. Fife, of Peterboro, named in your paper, is a nephew. All this I know to be a fact as I was living at Allendale, going to school with Sylvester Fife when his father was cultivating the wheat and we were then boys of 12 summers." William McDonald, of Sandfield, Ont., says on the question: "Fife wheat owes its introduction in Canada to the following circumstance. A quantity was shipped from a warehouse in Glasgow, sewn up in a Scotch bonnet and addressed with other goods to David Fife, township of Otonabee, county of Peterborough, Ontario, and the label thereon was marked Russian wheat or "Dansic." The shipper's name was William Struthers. I cannot give the exact date when the wheat came over to Canada, but this I know that in 1845 David Fife sold a bushel of it to a man named Henderson and in 1846 I and others got wheat from the first mentioned man Fife. Since then the Americans have had plenty of time to take it over there and grow straw large enough to play "Yankee Doodle" on. If necessary I can furnish a more minute account of it at any time."

* * * *

IN the April MILLER, it will be remembered, there was published an illustration of a defective water cock with a brief description of the same. A few days after the distribution of the paper I was shown by Mr. A. Fraser, sec.-treas. of the Boiler Inspection and Insurance Company, of Canada, a water cock of similar kind, that the Company's inspector had removed from one of our Canadian mills. "We not unfrequently find these defective cocks in various mills in the country," said Mr. Fraser, "and of course, always remove them. More than one man has lost his life because of carelessly allowing one of these cocks to constitute part of the make-up of the mill."

* * * *

It was my pleasure a fortnight ago to have a chat with Mr. D. B. Bowerman, of Bloomfield, Ont. Mr. Bowerman runs a successful mill in that locality and takes a lively interest in the development among the farmers of his district, of the growth of good milling grades of wheat. I thought, as I talked with this Prince Edward county miller of the importance of millers everywhere interesting themselves in the class of wheat sown in their various localities. The relationship between farmer and miller is so intimate that they should never do else than work harmoniously one with the other. That this is not a new subject, I am well aware, millers seldom meeting in convention without discussing the question. And yet they don't all "get there" nor do the farmers "get there." It is a subject where line upon line, here a little and there a little, a good many times will do no harm.

* * * *

Wheaten bread, says Dr. Colville, drove out the only other staple food—oatmeal cakes—just as the latter superceded the still older barley, bere and peas, from the meal of which scones and cakes were baked. Wheat loaves, according to Ramsay of Ochtertyre, became commoner than oat cakes had formerly been. In every house in Burns' time there was an iron girdle or circular iron plate for baking cakes, and the manufacture of the girdles was for many years a monopoly of the little town of Culross, which lies on the northern shores of the Forth, near Stirling. Burns says that the "Jolly Beggars" were so merry that "wi' jumpin' and thumpin' the very girdle rang." So far as many parts of Scotland are concerned, the baker is a modern institution, not being known in the latter half of the eighteenth century. About the year 1770 only two wheaten loaves per week found their way to two families in Auchterarder from the city of Perth, but by the year 1794 a baker in that town sold £200 worth of bread per annum.

* * * *

"It pays to raise buckwheat," remarked a local grain dealer at the board of trade. "I have a farm down east and have raised a considerable quantity of it at a good profit. A good crop of buckwheat yields 60 bushels to the acre, while the average is about 40 bushels. This year we have been paying from 40c. to 50c. a bushel for it, while wheat, averaging about 15 bushels to the acre, is bringing only 65c. to 70c. Put the average yield of buckwheat at 40 bushels to the acre and the average price at 40c. per bushel, we find that an acre yields $16, while wheat, averaging at 15 bushels and selling at 80c. only yields $12. Besides this, buckwheat is a convenient crop to handle. It is sown in July and reaped late in the fall. If fall or spring wheat, oats, peas or barley turn out poor the land can be made to produce a crop by putting in buckwheat. I have frequently put in buckwheat after taking off a hay crop, and have thus had two crops in the year. Buckwheat leaves the land in good condition for other grain, as the growth is so rapid as to crowd out all sorts of weeds. The land is usually quite clean after a good crop of buckwheat has been taken off."

* * * *

JOHN L. SPINK.

The men who pillar up our splendid town,
Are men who do the level best they can,
No town can run the risk of going down,
Whose people love the wheat and scorn the bran.

A man who loves the wheat is like the wheat,
And just as good as wheat where e'er he's found;
He fills with busy sound the noisy street,
And shakes with commerce all the grateful ground.

He holds the purse of that strong coterie
Who makes the future of our town complete;
They put their trust in him because that he
Is like the wheat—as sure as wheat, and just as good as wheat.

—THE KHAN, in the Evening Star.

The opinion is held very strongly by Mr. John Dyke, Canadian government agent at Liverpool, Eng., that Canadian export trade would receive a remarkable stimulus by the completion of the Manchester ship canal. "You want to know," said he in a recent interview, "why I believe Canada will be benefitted more than any other country outside the United Kingdom by this canal. The reason is very simple. Manchester is the centre of the densest mass of consumers in the whole world, and by means of this canal you bring Canadian produce right up to the very doors of these consumers. Take the one commodity of butter. Of the twelve million sterling's worth of butter imported into the United Kingdom, probably at least five millions' worth comes from Denmark and Scandinavia to Manchester and vicinity. The result is that Manchester merchants virtually control the trade, and make the prices for butter and also margarine not only for Great Britain, but for the Continent. Nearly half the import comes to Manchester and district. Consider that within a radius of twelve miles of the Manchester wharves of the Canal—there are no fewer than two millions of people. That is to say that Canadian produce can be brought in transatlantic steamers right into the midst of this immense population; while, taking a further radius, you find Manchester the centre of seven millions of people—a greater population than is attached to any other seaport in the world. Holland and Belgium are considered the most densely populated countries in Europe. They have 416 persons to the square mile. The United Kingdom has 310. But the density of population in the district Manchester serves is thirteen times as great as Holland and Belgium, and nineteen times as great as that of the rest of the United Kingdom. Canadian products are not now shut out from these people, but the freight rates from Liverpool to Manchester greatly retard their expansion."

* * * *

Mr. Robert Meighen, of Montreal, president of the Lake of the Woods Milling Company, has recently paid a visit to Winnipeg, Man. Interrogated by the interviewer, he said that the object of his visit was business and pleasure. "I am," said he, "on a trip of inspection of the company's properties. Since I have become actively connected with the Lake of the Woods company we have purchased the Portage mill, and I wish particularly to look over the establishment. I have now seen for the first time the Keewatin mills, and I am thoroughly well satisfied with the management and that of the Winnipeg office." "What has been the result of the advance in the price of wheat which your company inaugurated last winter?" "Very satisfactory. We thought the time had come for an advance in prices, and we did advance them. If at present our action is not publicly sustained, we have little fear but that future events will do so. The combined capacity of our mills is as follows: At the Portage and Keewatin we manufacture daily 2,700 barrels of flour. Every day, on an average, we ship sixteen carloads of flour and feed, so that I think we will be justified in saying that the Keewatin is not doing Winnipeg any harm, as it is from this city the greater portion of our supplies are sent." "There is some talk of your company erecting a mill at Montreal. What truth is there in it?" "It is one of the possibilities of the near future. We are figuring on it at present. If erected it will have a greater capacity than even the Keewatin mill. Our object in building it in Montreal would be on account of the excellent shipping facilities to be had in that city. The products of our mills would then be distributed as follows: Portage mills, the country to the west of the town; Keewatin mill, all the district east to Montreal, including Ontario, the balance not required would be exported; Montreal mill, Quebec, Maritime provinces and Great Britain." Mr. Meighen gave it as his opinion that the Manitoba No. 2 hard wheat of last year was the finest in the world. It is in great demand all over Ontario. The bakers in the east, after using Manitoba flour, prefer it to all others. It is twelve years since Mr. Meighen visited Winnipeg and he expressed the marked change in the appearance of the city by the word, "Wonderful!" He is accompanied by Mrs. Meighen, who is a sister of Lord Mount Stephen.

COOPERAGE D'PT.

There is a close affinity between the work of the cooper and the business of milling. The miller is either his own cooper, having a cooperage as an adjunct to his mill, or else he rests for his supplies on an outside cooperage. The cooper in any case finds one of his best customers in the miller. The object of this department is to bring each in close touch with the other and to materially advance the interests of both trades.

TRADE REVIEW.

THERE has not been any great change in the situation of the cooperage market during the month. The weather has continued very wet and there is hardly enough stock in shipping condition to supply the immediate wants of the millers and coopers. This is especially the case in heading, which continues very scarce indeed ; while at all the mills there is a large quantity of heading boards, still they do not dry out and kilns are only run under great difficulties. There are not a great many heading mills which run a first class dry kiln, and those who do run a first class dry kiln are taxed to their utmost capacity to supply the demand for heading.

Of course, there is no air dried heading on the market ; the apple crop last year cleared out all the dry boards that were on hand at mills where they turned air dried heading, and there are not sufficient mills in the country with first-class kilns that can run during the winter months to supply the requirements of the trade.

Hoops are now being manufactured freely, and while there is no surplus as yet, still there are enough to supply the trade. We only want two weeks' drying weather when there will be ample staves to meet all requirements, and while we do not expect there will be a surplus of heading before July or August, still we think there will be in the course of another month enough to go round.

The following are the prices of cooperage stock at present, free on board cars at the mills :

	Per net 1,000
No. 1 30" jointed or unjointed elm staves	$5 00
" 2 30" " " "	3 00
" 1 24" " " "	4 00
M. R. 30" " " "	4 65
	Per set
No. 1 17⅛" baswood or hardwood heading..	4¼c.
" 2 17⅛" " " " ..	3½c.
	Per net 1,000
No. 1 5½ft. patent coiled hoops	$5 40
" 1 6½ft. " "	6 00
" 1 4½ft. " "	4 00

The apple crop in the western peninsula looks very promising, and should there be no frost, we expect a large demand for apple barrel stock this fall ; it is almost a little early yet to build on this, but the next two weeks will virtually decide the fate of the apple crop.

MINNEAPOLIS CONDITIONS.

More than an average dulness has prevailed among the cooper shops during the past month. This has been due in part to the temporary closing down of the several leading mills during the month. This slack would not be unwelcome to the coopers were it not that on top of this idle season comes a deluge of barrel stock. All the accumulated stock of the winter that has hitherto been unfit for shipment is now coming into the city, blocking up the team tracks and running up demurrage bills. The shippers of some of this overplus elm stave stock are offering it at $6.50 to get it off the tracks. Much as the shops would be pleased to take up the bargain, few are in condition to receive more stock at present. The warehouses are full and stock is stored in places really unfit for its reception. One of the causes of this blockade is that one shop had been idle because of fire for over a month. Elm staves, bought at $6.75, are being received, as are also some on contract made at $7.50. The former figure will rule on the bulk of stock used during the summer. Certain factories are offering oak staves at 13 cents a set, but there is no call for them. Heading contracts are being made as low as 4½ cents, though 5 cents has been paid for delivered lots. Some is coming in at 4¼ cents, but this is on contracts made last season. Coiled elm hoops are in good supply and are to be had for from $6.90 to $7.50. On May 1st, according to a previous understanding, the price of finished flour barrels was reduced from 37½ to 36½ cents. One shop still furnishes on an old contract at 36 cents.

FOREIGN TRADE NOTES.

Staves in Amsterdam are only sold there by consignment.

Trade in American staves in the Netherlands is steadily expanding.

The cholera scare last year seriously affected the import of staves from America to Germany, most industrial operations being at a standstill.

White oak staves are in greatest demand for the shipment and storing of wines in Italy. The market for wine cask staves is controlled entirely by the American product, except as to the Italian chestnut, the cost, dimensions, and requirements of the latter being given for the benefit of American manufacturers.

The number of staves produced yearly in the Kingdom of Poland is about 6,000,000, and their value amounts to nearly 1,000,000 roubles. The kind in greatest demand are oak staves. Staves are made at Warsaw and in the larger towns of Poland. Three score, or 60 pieces cost up to 10 roubles. The staves most used are those cleft or split according to the grain of wood, which must be white and elastic oak, without any knots or knags.

Staves can be imported into Russia free of duty. Staves are sold here for home consumption, as well as for the export trade, in bundles of sixty pieces each, ranging in price from 30 cents to $5 per bundle according to size and quality. This is a prominent industry in Poland and the Baltic provinces, and also in Finland as well as in the Caucasus and other provinces of the Empire where this species of oak is common. There is but one kind of timber valued in Russia for staves, namely, the Quercus pendiculata. The oak forests of Russia will be able to supply the demand for many years to come. Probably one-half of the stave product is exported, largely to Spain, Portugal, Germany, France, and England, although, for some reason not understood here, the export trade in staves has greatly declined in the last few years.

COOPERS' CHIPS.

Manufacturers of staves and heading will be interested in the advertisement of the Dominion Dry Kiln Co., of Toronto, on another page.

Stuart Long & Co., Chesaning, Mich., start out with $12,000 capital stock to carry on a lumber and stave business. The members are H. Stuart, E. T. Long and F. A. Greenfelder.

F. C. Heal, a lumberman and stave manufacturer of Yorktown, Ark., was recently murdered and robbed, while travelling, with considerable money, from the above place to Pine Bluff.

D. A. Gordon, of Steinhoff & Gordon, Chatham, Ont., paid a visit to Minneapolis recently. This firm, with a view to giving more particular attention to northwestern business, has established an agency in Minneapolis, with D. H. Sill in charge.

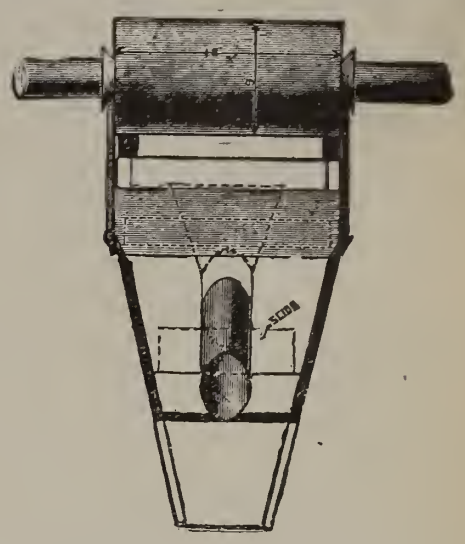
The Chicago market is dull with not much doing. Receipts of cooperage and coopers' stock are light, there not being much inducement for shippers to try the market. Lard tierces are selling at 87½ to 90 cents, and pork barrels at 67½ cents. Dealers cannot give much encouragement to shippers, either in respect to cooperage or stock. The market seems to have gone into prolonged quietude.

Louis Fritz, of St. Louis, is the patentee of a barrel on which the claims are : 1. In a bilge barrel the combination with the wooden section with the grain running circularly and formed with grooves near the meeting edges and with grooves at the top and bottom forming annular shoulders, and the metallic cleats, of the pivoted semi-circular heads. 2. A bilge barrel comprising two or more superimposed wooden sections, with dovetailed top and bottom edges, and tongue and grooved meeting edges, and formed with tapering vertical grooves, the metallic cleats engaging in said grooves, and the pivoted semi-circular heads.

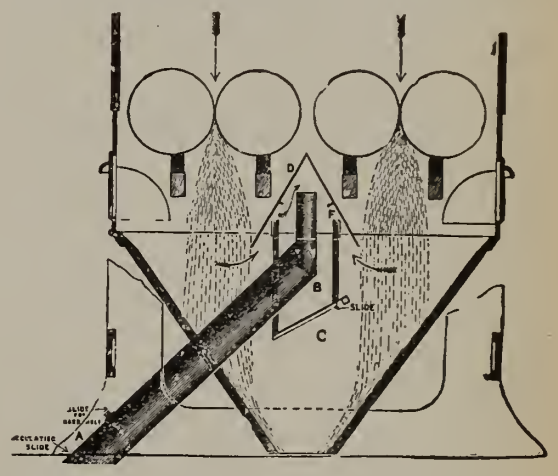
When a man borrows his wife's knife, he loses it ; and when he wants it again, he asks to borrow it again, believing that she can find it.

PATENT EXHAUST FOR ROLLS.

An English mill furnisher has recently equipped several mills in Great Britain with rolls having the



exhaust from below, as shown in the illustrations given herewith. They claim that this is the best position



PATENT EXHAUST ARRANGEMENT.

for its perfect action, and that with a gentle suction, the hot air generated in grinding can be taken away without any waste of products.

THE ENGINE ROOM.

It is as great a mistake to paint an engine room floor as it is to whitewash the ceiling, writes M. Cable in Power. It has been said that the moisture from steam will cause whitewash to flake off, and where it falls on the working parts of machinery it will act as will so much emery. As to painting of floors, it had been my practice for a number of years to have the floor of my engine room given a coat of paint twice yearly. The place would look sleek and bright for a few weeks, and then begin to show uneven wear. Parts of machinery moved on the floor would leave their tracks, and the use of soda for washing the boards would cause shading not at all artistic. Planed tongue and grooved lumber without paint may be washed once a week with potash or lye water, and will soon bleach out, and will always present a good appearance.

TOO BUSY TO READ.

"TOO busy to read!" Well I'm sorry for you;
You're busier far than occasion demands.
I'm afraid you just bring that objection to view,
To rescue yourself from the canvasser's hands.

If you are too busy to look at the page
That tells of the methods that others pursue,
That shows you are lagging in this busy age—
You don't drive your business—it seems to drive you.

The plans and ideas, the systems and schemes
That other men find it pays them to employ,
Are just what will help you to live out your dreams
Of plenty, prosperity, honor and joy.

If you would but take time to read and reflect,
Your business would yield you the time that you need.
For those who have tried it have found this effect—
By reading theyv'e learned to have more time to read.

—Business.

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

RECIPROCAL ARBITRATION.

THE arbitration clauses in the constitution and by-laws of the Toronto board of trade are among the most useful that legislation has granted that body. Similar clauses were adopted by the Dominion Millers' Association at the time of their incorporation less than a year ago. The Montreal Trade Bulletin suggests that not only might disputes between individual members of the same board of trade be settled by arbitration, but that the disputes between members of different boards of trade be settled in a like manner.

Of the suggested reciprocal arbitration the Bulletin says: "A case has been brought to our attention in which a Toronto firm sold 10,000 bushels of grain to a Montreal house early last winter, when prices were lower than they are to-day. After a good deal of delay the Toronto firm fulfilled part of the contract by delivering 5,000 bushels at the stipulated price, since which time it has been repeatedly requested to complete the contract; but as it refused to answer the letters of the Montreal firm, the latter communicated with the Toronto board of trade with a view to having the matter heard and adjusted before that body, the reply to which was as follows: "In reply to yours of 14th inst., I regret to say that our by-laws provide only for the settlement of disputes between members. There is no reciprocity between the board of trade of the Dominion in the matter of arbitration." This was quite a surprise to the firm here, which thought the above case was just such a one as the Toronto board of trade would have recognized as within its jurisdiction, but it seems that it can only arbitrate in disputes between its own members; and if the same rule applies to the Montreal board of trade it is high time that steps be taken to bring about reciprocal action in matters of this kind, so that members of the Montreal board of trade are allowed to arbitrate with members of the Toronto board of trade, and vice versa. Another case has been brought to our notice recently, regarding a member of the Winnipeg board of trade, who sold options in Duluth and Minneapolis, and refused to settle his deals; but upon the authorities at Duluth and Minneapolis representing the case to the Winnipeg board, the latter took prompt action on it and decided that he must settle his claims, and upon his refusal to do so he was sold out and expelled from the board. If reciprocity exists in such matters between Winnipeg, Duluth and Minneapolis, how much more important it is that a similar understanding should be arrived at between the boards of trade of the Dominion."

OVERCROWDING THE MILLER.

WE are hearing continually about overcrowding the mill with machinery, until, as is the case in some mills, workmen are tumbling over one another in the performance of their daily duties. Work is ever done at a disadvantage, and an increase in cost when these conditions exist. But we do not hear so much about the overcrowded miller, and yet a mistake of management is made in this particular perhaps as frequently as in the other. A temptation to keep down expenses is of course a primary cause of such management. Crowd the man, however, whose place it is to see that everything is running smoothly, and with the least waste of force and labor, with numberless unnecessary details and something will be neglected, and in the end it is often that which proves most disastrous and expensive to the mill owner.

Mr. C. R. Tompkins, the well-known writer on mill topics, in discussing this question some time ago attributes this tendency to overcrowd the miller with work to a misconception of the place he is required to fill in the modern mill. The principle requirements of the stone miller, in the days of the old system, consisted in being able to dress a run of stones in a skilful manner and adjusting them to the different material to be converted into flour or meal, and when this was accomplished the balance of the work was simple as compared with the modern mill, and previous to the introduction of improved machinery in the process of flour-making. He was then able to look after not a few matters connected with the business of the mill. In the modern mill more is required of him. The additional machines, spouts and elevators that go to make up the outfit of the modern mill all require attention and must be carefully looked after and kept in working order and adjustment, while each spout and elevator must be watched to see that no chokes or breakdowns occur. The neglect of anyone of these matters and many others for which he is responsible, may be productive of an expensive and an awkward accident.

Profits are cut so desperately low in flour-milling these days that every mill owner is striving to conduct his mill at as little expense as the size and requirements of the business will permit. And if he is a careful man he cannot watch too minutely the out-go of every dollar of expense. Wherever he can save he should save, always providing that in economizing at one end he is not giving rise to an increased expenditure, by the very act of economy, in another direction. We may take it as a safe business principle that the workman who has his employers' interest conscientiously at heart will shirk no work that he believes will advance the interests of the business. But the same spirit of conscientiousness that causes him to take this deep interest in his work will influence him to assume extra duties that he cannot efficiently perform along with those that already rest upon his shoulders. . The place of the mill owner is to see that the willing horse is not, unconsciously, overburdened; he will do this in his own interest and for the behoof of his miller.

EDITORIAL NOTES.

In any enterprise the greatest progress is only possible with the least friction. This is the natural law in the business world, and its bearing is strongly against all violent or revolutionary methods.

BEFORE sowing his wheat, says a correspondent of the American Agriculturist, the Hindoo farmer consults a Brahmin to fix the auspicious time. This being determined, he appoints a man to do the first sowing, after which any one can dribble the seed, but not before. The farmer's wife, on giving out the seed, reserves a little, to which she adds more grain, and then distributes it to the officiating Brahmin, the plowman and laborers. The average amount of seed for an acre is 150 pounds. The wheat is carefully weeded, the weeds serving as food for the people, and the grass as fodder for the cattle. In most places the fields have to be watered, and this has to be done, usually, about three times, first, after the seed germinates, next when the wheat is about to blossom, and the last when the wheat is in the ear. The average cost of watering, which is by different processes, is about $2.25 per acre.

JUST what will be the effect of backward weather on the growing crop, as well as on the work of the spring season, it is a little difficult to say. Everywhere the season is unusually backward. With present residents of Manitoba the backwardness is a revelation, for whatever the oldest inhabitant may have to say those who have been the active residents of the province in later years can draw no parallel with any year in their experience. Seeding in Manitoba last year was later than the average, being general about April 14. This year it is running considerably later. What the result will be will depend a good deal on climatic conditions when the end of the season comes in sight, and with the Northwest this is rather precarious. A season cut off short at both ends could hardly be else than unfavorable in its ultimate termination. The lateness that marks Manitoba has a relative application in Ontario and the other provinces, affecting the outlook, measurably, throughout the entire Dominion.

IT is well understood by stock-breeders that close inter-breeding of animals, begets various physical imperfections. The vigorous is sacrificed for the fancy, and from the practical point of view the animals so used become of very little value. Nature rebels against this practice outside of the animal kingdom. We have taken occasion to remark elsewhere that recuperation is a law of nature and even the soil itself enters its protest when worked too hard. An application of the same rule to the vegetable kingdom is told in the experiments carried on for ten years past at Newton-le-Willows, Lancashire, Eng., by Messrs. Garton, the well-known seedsmen. They claim to have arrived at some remarkable results by the process of "cross-breeding" in cereals. After a decade of experiments their net conclusion seems to be that with cereals disease is in a large measure due to constitutional weakness. They hold that as cereals are self-fertilizing and are provided with reproductive organs so placed as to render impossible fertilization by insect or atmospheric aid, it is inevitable that the close inter-breeding which has resulted from these conditions should, by sapping the natural vigor of the plant, invite disease. They say that experience has taught them that rust is a disease peculiar to the constitution of certain wheats, and that it may be removed or rendered much less acute by judicious cross-breeding.

IT is not all gold that glitters even with so exact an institution as an established mercantile agency. The Shareholder, of Montreal, a journal that closely watches financial affairs, draws attention to the serious discrepancies that exist frequently in the usual quarterly reports of the Bradstreet's and Dun & Co's. mercantile agencies. For the past quarter Bradstreet's gives the number of failures in Canada, in which are included 5 in Newfoundland, at 526, while R. G. Dun & Co., show the total at 474—a difference of 52. The former agency gives the total liabilities at $4,788,824, while the latter places them at $4,664,319—a difference of $124,505. It thus appears that Bradstreet's reports 52 failures and $124,505 liabilities more than R. G. Dun & Co. Both cannot be right. Both may be wrong. "Statistics of this kind to be of any value," remarks our contemporary, "must be reliable. If they are not reliable they are useless and worthless." Inaccuracies are shown not only in the general reports but also in the reports of individuals and firms. One needs only to compare the published ratings of these two concerns, or ask for a detailed report of some individual firm to learn how wide apart they may be in the particulars furnished. Recent difficulties of Mr. Erastus Wiman, an active partner in one of these agencies, show that it is quite possible for a mercantile agency to require a standard of business ethics for the general business public, but stray away some from these in their own practice. The irony of Fate, remarks the Montreal Journal of Commerce, could not have a more cruel pulse than the name of "Erastus Wiman" appearing in Mercantile Agency books as an insolvent.

"I have dealt," says Jeremy Granule, "with cross men, meek men, finicky men, slack men, cold men, hot men, stingy men, and cranks generally, but by none of these have my peace and serenity been so deeply disturbed as by the unpunctual, and for none of the unpunctual have I so little forgiveness as the shamelessly unpunctual."

VIEWS AND INTERVIEWS.

France Commercially.

"In 1874," remarks a writer on milling topics, "France led the world in wheat production. She will never do so again." The prediction is likely true. The commercial history of France, like her political history, has in many respects been a checkered one, and it has not been wanting in variety. But it has ever lacked stability. Her statesmen have been the most brilliant. Her Napoleons of finance, like Colbert, Minister of Finance, under Louis XIV; her students of political economy, like Sully and Bastiat, have had few peers in the world's history, but in the language of the day, France has not had the "get there" faculty. She will ever be interesting; admiration for her many excellent parts will not be wanting; her supremacy commercially among the nations of Europe is one of the miracles that is never likely to materialize.

What We Eat.

"What becomes of the steel worn from smooth rolls by the scrapers?" asks a writer in the Milling World. "Evidently, it must go into the flour," is his answer. "It finds its way into the bread made of the flour, and it is finally eaten. What is the effect of such diet on the eater? The amount of metal thus driven into flour is very small, and there is no record of any trouble arising from the consumption of bread in which steel is to be found. All rolls wear away, and all the worn-off metal must find its way into the flour. For that matter, purifiers wear out, too, and some of the worn-off silk probably goes into regular consumption with bread. It would be interesting to know just how much and what sorts of 'foreign matter' are to be found in wheat flour, even the finest, the best and the purest. Investigation should yield some very instructive results." Investigation would reveal many strange things regarding all we eat and drink, though, perhaps, the flour goes from the miller to the baker with as few impurities as any of the various articles that go to make up the bill of fare of the average table.

The Real and Unreal.

Don't rely on the label on the bag, someone has said. Why not? The label is the outward mark of the contents inside. At least it is so intended—so supposed to be. Does it not speak sincerely? That's where the point of the admonition comes in. We live in an age of substitution. Patent medicine men have organized against the practice, so far as their wares are concerned. The false is constantly substituted for the true; the real for the unreal. Things are no longer what they seem. Spurious seed is substituted for the genuine, and a disappointing crop is the result. We have had oleomagerine in place of butter, and someone proposes to manufacture eggs by a chemical process, and these are to be served up for breakfast in the stead of the new-laid eggs fresh from barn or loft. All this and much more meets us on every hand. But above all things else the flour we grind should be pure in product, as we are disposed to view it as pure and white in color—not a mere whited sepulchre. Tradition not only paints the miller as an ensign of placidity and contentment, but on his countenance are supposed to have been written the evidences of the man of simple and genuine honesty. It would be a pity to know that his contact with the business methods of the nineteenth century had in any way altered the favorable record that comes to us from the past.

A Broader View.

It is not alone men who are lost in the desert or the forest, who walk in a circle. Some men, as the saying goes, trot around from day to day the one little cabbage leaf and imagine that its circumference is the circumference of the world. They see nothing beyond it but darkness. Other worlds may have an existence, but to them these are as mysterious as the planet Mars. There are business men built on this plan. It is needless to say that they have no use for a trade paper dealing with matters connected with their calling. Nothing is to be learned outside of the knowledge they already possess. They know it all. But somehow, just as with the tree whose roots receive no water, a process of general decay gradually sets in. Or, like the farmer who works the same soil from year to year, constantly cropping it, and never feeding it with needed nutrition, the powers of giving forth finally weaken and are eventually lost. One cannot constantly give out and never take in. The system of reciprocal recuperation and feeding exists all through nature. The man of business, who expects to rise to the heights in the world of commerce, must widen his horizon, broaden his vision, dig deep, look up and beyond, be ready and expectant of learning something new and valuable every day. There is no such thing in the world of business as living like the oyster, closed up in one's shell. There are worlds beyond.

Walking In a Circle.

Everyone, and especially those whose work takes them over long distances through woods and forest or across the barren plain, have doubtless noticed that it is impossible to walk in a straight line unless some observable objective point is ahead of them for which they are making. The invariable tendency is to walk in a circle, and thus it is that many people are lost on a desert or in a forest. A writer in Pearson's Weekly says that this circumstance is due to a slight inequality in the length of the legs. Careful measurements of a series of skeletons have shown that only 10 per cent. had the lower limbs equal in length; 35 per cent. had the right limb longer than the left, while in the other 55 per cent. the left leg was the longer. The result of one leg being longer than the other will naturally be that a person will, unconsciously, take a longer step with the longer limb, and consequently will trend to the right or to the left, according as the left or right leg is the longer, unless the tendency to deviation is corrected by the eye. The left leg being more frequently the longer, as evidenced by measurement of the skeleton, the inclination should take place more frequently to the right than to the left, and this conclusion is quite borne out by observations made by a number of persons when walking blindfolded. Further, on measurement of the arms, it is found that in 72 per cent the right arm is longer, showing that a considerable majority of persons are right handed and left handed. The inequality in the length of the limbs is not confined to any particular sex or race, but seems to be universal in all respects.

LOSS FROM THE USE OF WORN-OUT MACHINERY.

IT is poor economy, says the Scientific Machinist, to continue a tool or machine in use after it has served its time and is ready for the scrap pile. Yet we see it done every day. Machines that will turn out less than half the work that new ones would are being run in many shops and many manufacturing establishments. The slow operation is not the only loss. Inferior work, stock spoiled and time spent in rigging and fixing up are to be added—and important additions they make. Often labor less skilled can do with a good machine what can be done only with much more costly help on an old tool.

Nor is the machine shop the only place where great loss is entailed by the use of worn-out machines. Some plants are even more in need of attention. The possibilities of waste at the source of power are very great. Badly designed furnaces, boilers venerable with age and in execrable condition, defective chimneys, bad steam conditions and appliances, worn-out, shaky engines and incompetent engineers and firemen, are costing manufacturers enough every year to cut down very materially the aggregate net earnings of all concerns using power. Manufacturers who will go out of their way to save a piece of material worth ten cents and scold their workmen for not looking carefully to economy in this direction will listen complacently to the complaints of their foremen condemning used-up tools, and the recommendations of their engineers that repairs, or new purchases of engines, boilers, pumps, injectors, packing, lubricators, etc., be made, and pass them by with the mental comment that "guess if they have served so long, they can a little longer," or something of that kind, seemingly blind to the fact that the worn out machinery is eating up earnings enough to buy new in a short time.

If they looked more to the performance of machinery there would be less complaint of small margins.

HIGH STEAM PRESSURE.

IT is well settled that engines can be worked with less consumption of steam if run at high boiler pressure, on either the compound or other multiple-expansion system, than at low pressure, and the present tendency in steam-engineering circles is toward an increase of pressure rather than a decrease. What the exact ratio of gain is as the pressure is increased has not been absolutely determined by any experiments of which we have knowledge, says the Engineering Record, but there are sufficient data which may be obtained here and there to make the fact of the increased saving certain. For example, there have been experiments showing that a compound engine of the Corliss type, working under 80 pounds pressure, will use from 16 to 17 pounds of steam per horse-power per hour. There are other cases where a similar engine at 110 pounds pressure uses from 13 to 15 pounds of steam per horse-power. Other data are available which show that at 150 pounds pressure the consumption of steam is reduced by triple-expansion engines to 13 pounds, or, perhaps, as low as 12.5 pounds. Making allowances for differences in the type and condition of different engines from which data have been obtained, there is ground for the belief that with an increase of pressure from, say, 100 pounds to 150 pounds in the compound engine, with suitable change of proportion to realize the full advantage due to expansion of the steam, there is at least 10 per cent., and, perhaps, 15 per cent. saving in the engine carrying the highest pressure. Without going into refinements there is further reason to believe that between a compound engine running at 100 pounds, and a triple-expansion engine running at 150 pounds, both suitably proportioned and loaded, there is a similar gain of at least 10 per cent., and perhaps, 15 per cent., due to the engine working under the higher pressure and greater expansion. These figures are given to show the general feeling among those who are well informed, rather than to define exactly the relative economies; and it may further be added that they are intended to indicate the relation which exists in engines which are in good order and well maintained, and the relative economy only in the consumption of steam.

To secure the benefits of high pressure it is necessary to provide extra strength in the boilers, in the steam piping and in the engine itself, or at least in the high-pressure cylinder to withstand the increased strains. It is necessary to employ more stable joints, besides a better class of packing, and the whole equipment must be adapted, in its various details, to resist the stronger forces which are brought to bear upon it. When the plant has been well designed for these special duties, it must, when set to work, be watched with increased care, and by a more skillful class of attendants, to keep it properly maintained, than one designed for low-pressure. The breaking out of packings, and the increased wear of steam valves and pistons in the engine, introduce waste where high pressures are carried, which may be entirely absent where the pressures are limited to those which have been common in the past. Extra wear and tear and depreciation, and the losses of steam and fuel which they cause, are the accompaniments of excessive pressure even when the construction is of the best class, and these, so far as they act, offset the intrinsic advantage which might otherwise be obtained. The interest and depreciation charges on the more complicated and expensive plant, the waste of steam referred to, the extra cost of attendance, and the increased cost of repairs and supplies, use up at best a large part of the saving of fuel, which can be made by the more economical engine, and these may become, with careless management, even larger in quantity than the entire amount of saving, so that the use of high pressure produces a net loss rather that a gain.

Unless those who are intending to profit by employing excessive steam pressures and a properly proportioned engine, either of the compound or triple-expansion class, are prepared to combat the difficulties in handling the increased forces here briefly alluded to, and make proper allowance for the waste of fuel and current expenditures incident thereto, it is almost folly to expect in the end satisfactory results.

Subscribe to the CANADIAN MILLER, $1 a year.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

CREATING A MARKET FOR FLOUR.

A PRIME, and perhaps, the first essential in the manufacture of an article of merchandise is that it shall be well made. The spurious will not unfrequently outstrip the genuine in popular favor, but its success is seldom enduring. Whatever the article of manufacture may be let it be the best that skill and experience can produce.

Some manufacturers stop here. More is required. The next step is distribution. The consumer must be reached. The something made is not for one's self, but for others' use. How can the others be reached? Various avenues of distribution are open. One may carry the goods to their doors. The ubiquitous peddler has proven the pioneer in the introduction of many of the best articles before an appreciative public to-day. Don't despise the peddler or canvassing agent. The commercial traveller, the much despised agent graduated, can introduce ones wares to a wider range of territory and in this manner help to enlarge the manufacturer's output.

These are methods which, if to be successful, must have good business backing from inside. The orders secured by the traveller must be carefully and promptly filled by the manufacturer. Customers must be treated with courtesy and in a straightforward business manner. Their particular wants, and the wants of particular localities, must be studied; sometimes what may seem to be only a foolish whim of the customer cannot have other than considerate treatment.

But every matter of importance having had practical and active consideration we come back again to what was hinted at in one of the early sentences of this article—without a market for the product of mill or factory all other efforts of the manufacturer, however perfect they may be, count for naught.

There is one method of pushing business, that has, in the present day, attained almost to the perfection of a science, and that has been resultant in some cases of very remarkable success. We refer to the matter of advertising. The very fact that it has become so important a factor in business success lends to it a significance that will not allow it to be treated with nonchalance by any shrewd business man.

It is not our purpose here to pursue the question outside of its relations to the business of the flour miller. Will it pay the miller to advertise? This question is not asked of the advertising manager. He might be disposed to turn the reply in one particular direction. The special purpose of the Mill Product Department of the CANADIAN MILLER is to help to create enlarged and profitable markets for the millers of this country. Will advertising help? Unless it will we want none of it. We have lately read an article on the question by Mr. T. S. Blish, manager of a flour mill in the country to the south of us. He discusses the question purely from the point of view of the miller. Ten years ago, he tells us, his company owned a small mill, capable of a very limited output. At this time a progressive policy was adopted; advertising on a considerable scale was made part of this policy, maintained at an expense of ofttimes a heavy percentage of the annual profits. The business was extended into new adjoining fields, increasing the demand so as to make it necessary that the capacity of the plant should be further increased. The advertising policy was continuously pursued, until inside of ten years the output of the mill had increased from a few barrels daily, doing a small local trade, to a mill the output of which is now one thousand barrels a day.

No doubt the "progressive policy" that had borne these results included more than intelligent and vigorous advertising. Mr. Blish is prepared, however, to give to advertising credit for a large share of the growth of the business within these ten years. He points to the trade of his concern in the various cities of the United Kingdom as an evidence of his contention. We quote his own words on this point:

"In appointing our agents in the different cities of the United Kingdom for our foreign trade, we selected one in Glasgow, who was just starting in business, and who had, from observations made in America, decided on a vigorous advertising policy. The result of that policy has been, that during the three years his business with us has each year increased one hundred per cent. We leave to him full discretion as to what medium he employs for the advertising, and have found them all beneficial, which does not, of necessity, go to show that our agent's judgment is exceptionally good, but that advertising, however done, reaps its own reward. With our foreign agents who refuse to advertise, claiming there is no room for it in their business, each year's sales stand at about the same as that of the preceding year. To illustrate the position taken by some of the latter named, I quote from a letter from our Liverpool correspondent, written in reply to our several communications urging him to adopt the policy of our Glasgow agent in the matter of advertising: "Although I consider that advertising certain articles is advantageous, I feel that all the advertising in the world would not assist the sale of flour on this market. . . . The best flour at the lowest market price will always command the trade here, no matter how much advertising be done. . . . I do not wish to throw cold water on your ideas of keeping your flours before the public, and I consider it shows the right and proper spirit of enterprise on your part; at the same time I feel it is my duty, in reply to your inquiries, to give you my ideas as nearly as I can. You can take my word for it that, as the old adage has it, 'Good wine needs no bush,' so good flour needs no advertising in this particular part of the world." Our business with the writer of this for the present fiscal year will fall some short of that of last year and about equal that of the preceding year. Several months ago we addressed letters to all of our foreign correspondents, offering to forward to them, for distribution among their customers, books of photographs of the World's Fair buildings, and asked them to advise us how many they thought they could use to advantage. Our Glasgow agent immediately made request for several hundred, while from one of the others we received a letter saying we "might send on a dozen," while from another in far off Christiania came the discouraging information, "I do not think it suitable to send the mentioned books to the customers in Christiania, such arrangements often causing the opposite of that for which intended." Now, what do you suppose would have happened if we had forwarded them? Do you think the falling off in the demand for our flours would have been immediate or gradual, as the beauty of the books became more familiar to the eye? Such ideas as are advanced by these unbelievers are difficult to believe or follow by us fellows, who like to believe we are in the "push," and the climax, as the result of such a policy, is as hard to conjecture as that of Frank Stockton's "The Lady and the Tiger."

Advertising, of course, to be successful, like everything else needs to be done correctly. It cannot be gone about in a slap-dash manner, no thought or care being given to the question, any more than good flour can be made by like careless methods. But done right, according to Mr. Blish's view—the view of a practical miller—flour mill advertising pays.

CURRENT COMMENT.

We lately had the opportunity of handling a sample of flour made in Japan from native wheat, in a Japanese roller mill, and shipped to this country as an experiment. The flour, which was of a beautiful color, realized just 21s. on Mark Lane market, and as the shipper must have lost 10s. on each sack he consigned, it is probable that not much of this flour will be seen in England yet awhile, at any rate.—The Miller, London, Eng.

What's in a name? Sometimes a pretty name like a pretty face counts for a good deal. Shakespere has told us: "A rose by any other name would smell as sweet." In the business world a pat, happy, catchy name given to an article of merchandise or manufacture has often had a good deal to do with the successful sale of an article. An English writer calls the millers of Great Britain to account for not being more rhythmical in the choice of names for their brands of flour. "Our home millers," he says, "are far behind their trans-atlantic cousins in giving names to their flours. Just look at A, B and C compared with Superlative, Minerva and Iron Duke, or Supers, Extras and Whites compared with Perfection, Ideal and Invincible, and you will see there is a mighty difference in the outward appearance."

The statement is made that the great Pillsbury-Washburn Flour Mills Co., of Minneapolis, are unable to declare an interim dividend for the past half-year. The directors say: "We have decided not to pay any interim dividend on the preference and ordinary shares this half-year, but we have every reason to hope that at the end of the financial year they will be able to pay a dividend of 8 per cent. on the preference shares. The debenture interest due on May 1 will be paid in due course." The Millers Gazette, of London, Eng., says that this concern, in common with other export millers, has been flogging a dead horse by persistently consigning flour to overburdened markets like those in England. Prices have thus given way 2s. 6d. to 3s. 6d. per sack during the past six months. The present quotation for the ordinary £10 shares on the Stock Exchange is £2 15s. to £3 5s.

The spirit of protection is showing itself among British millers and bakers. Discussing the question in the British Baker, Mr. Hugh Kerr says: "Why do we bakers use so much foreign-made flour, while our home millers are as well qualified, and, I doubt, not far more anxious to suit our requirements? If we would only consider how many extra mills we could keep working, how many extra men we could employ, how, in fact, we would benefit the country and, of course, ourselves, we would surely hesitate sometimes before buying foreign-made flour. I am afraid we are just a little selfish and that a supposed difference of, say threepence or sixpence a sack would make us either free-traders or protectionists. Before our home millers introduced the roller system into their mills, I have no doubt but that other countries were ahead of them, but since they have now without exception gone in for rollers instead of stones, it will be hard indeed to prove them a whit behind any other country. One thing in favor of home-made flour is that it is the only single flour that will make good bread, that is to say, if we use foreign flour, we have to blend it so as to produce a good loaf. Some of these flours are too strong, some of them are too weak, some too dark, and some too dear, and unless we are all the more experienced in the blending of flours, it goes without saying that we are a deal safer to use brands of home-made flour. Our home millers have also this advantage over almost any other country, that they have greater choice of wheats, for, should one district or country be short or inferior, they can easily supply the deficiency from some other source. We can also rely upon our own millers as to condition. We may get foreign flour out from the ship-side damp and lifeless, and, again, it may have been in a flour dealer's warehouse only he knows how long. Our home-made flour is also uniform in quality, and except in very exceptional circumstances varies very little; while it appears to me that the first lot of any foreign brand you get is almost always the best you will get, and that from time to time it gets worse and worse, till finally it disappears altogether, and some other brand like a newly discovered comet appears to take its place."

THE FLOUR MARKET.

A rather better feeling prevails in flour both in Ontario and at Montreal. There has been more demand and the outlook would seem to be improving. Prices, however, remain about the same. Export trade continues

dull and unsatisfactory. British millers are puzzling their heads more than enough over the conditions of the market, which continues glutted with undesirable flour from America. Newfoundland trade is still inactive, the market holding an abundance of United States flour. A fair trade, however, with this colony is anticipated this spring.

PRICES OF FLOUR AND MEALS.

TORONTO: Car prices are: Flour (Toronto freights), Manitoba patents, $4.30 to $4.50; Manitoba strong bakers', $3.90 to $4.25; Ontario patents, $3.25 to $3.50; straight roller, $3 to $3.20; extra, $2.65 to $2 80; low grades, per bag, $1 to $1.25. Bran—$12 to $13. Shorts —$14 to $15. The Flour and Grain Trade Bulletin, of the Dominion Millers' Association reports: "Sales: straight grades at $3.15; patents at $3.15 to $3.30 per barrel, f.o.b. for Lower Provinces. Bran—$11.50 to $13; shorts—$15 per ton."

MONTREAL: Patent spring, $4.25 to $4.35; patent winter, $4 to $4.25; straight roller, $3.50 to $3.65; extra, $3.10 to $3.25; superfine, $2.70 to $2.90; strong bakers' (Man.), $4 to $4.10. Meal—The demand is unimportant and prices are unchanged. We quote: Granulated in bbl., $4.10 to $4.30; granulated, in bag, $2.05 to $2.15; standard, in bbl., $3.95 to $4; standard, in bag, $1.85 to $1.90. Feed—There is a fairly good demand for feed at steady prices. We quote: Bran, per ton, $15 to $15.50; shorts, per ton, $16.50 to $17; mouillie, per ton, $21 to $23.

MANITOBA: Winnipeg: prices to local trade: Patents, $1.95; strong bakers', $1.75; XXXX, 75c. to 95c. superfine, 60c. to 70c. Bran has been very scarce. Prices are unchanged at $12 for bran and $14 for shorts in broken lots delivered in the city, or about $1 less in car lots, on track here. Oatmeal held at $1.95 to $2.10 per sack, according to brand, for rolled and granulated and standard meal, 5c. to 10c. lower, these being prices to retail traders. Cornmeal, $1.65 to $1.70 per 100 pounds. Split peas, $2.60 to $2.65 per 100 lbs. Beans, $2 to $2.10 per bushel. Pot barley, $2.50 per 100 lbs. Pearl barley, $4.

"DONT'S" FOR STEAM USERS.

DO not condemn any appliance introduced ostensibly for the purpose of securing economy or safety without giving it a fair trial, as some of the most valuable inventions now in use were ridiculed and rejected when first introduced. Many excellent "devices" have been condemned by those having the care of boilers and engines.

Do not discountenance any device, invention, adjunct, or arrangement that will lessen your labor, induce economy, and at the same time give a guaranty of safety. Give everything placed in your charge by your employer a fair, impartial trial.

Do not allow the boiler front to become filthy or the gauge-cocks to leak and become covered with mud and the salts resulting from impurities in the water, as this would furnish strong evidence of slovenliness.

Do not let anything connected with the boiler in your charge run from bad to worse, with the idea that at some certain time you will have a general overhauling and repairing, because an accident may occur at any moment, involving serious loss of life and property.

Do not neglect to have a boiler insured when practicable, as insurance is generally accompanied by intelligent inspection, which furnishes a guaranty of safety to the engineer, owner, or steam user.

Do not reject the advice or suggestions of intelligent boiler inspectors, as their experience enables them to discriminate in cases which never come under the observation of persons of a different calling or pursuit.

EXHAUSTION AND ACCIDENTS.

IN investigations made as to the causes of industrial accidents, not a few of these are traceable to exhausted and overworked labor. Men as yet are not cast iron automatons, nor is there that metallic fidelity in bones and sinews that we find in locomotives and clocks. There is a limit to the vigilance and endurance of the strongest of men, and imposition in that direction is not only a claim on a humane society but an occasional subpœna of the coroner. In many cases of accident the cause is not so much due to carelessness as to helplessness.—Age of Steel.

Office of the CANADIAN MILLER,
MAY 15, 1893.

THE GENERAL SURVEY.

THERE is the usual conjecture of the present time of the year concerning the future crop. The condition of the winter wheat, and the prospects for spring wheat, are two leading factors of the situation. The damage done winter wheat by reason of the unusual severity of the past winter has probably been exaggerated some, but that there has been more than average injury from this cause, both in the States and Ontario, and to some extent in Manitoba, all the information get-at-a-ble makes clear.

The latest bulletin of the Ontario Bureau of Industries brings us reports of the province up to April 17, and is more roseate than later information from various districts would justify. The summary of Secretary James is in these words: "Taking the province as a whole, the fall wheat crop has come out of the winter in good shape, very little damage has been done, very little will be plowed up, and the prospects are very promising and above the average." It is known, however, that a re-examination of the crops in not a few sections within the past thirty days has shown the necessity of plowing up many fields of grain that had been winter killed. This is the case in important strips of country in western Ontario, where re-plowing has been done and spring wheat planted. Barley has been made the substitute in other cases, the hope being held out that the duty imposed by the McKinley tariff will be annulled by a Democratic Congress, and that a large demand, as no doubt would be the case were the change to take place, would spring up in New York state for Canadian barley.

Those who have an opportunity of learning accurately of the progress of seeding in Ontario say that it is not as backward as had been supposed would be the case from the general lateness of the season, and if no set-backs appear later the crop will show up a good average. Reports from Manitoba are somewhat conflicting. Seeding is undoubtedly late, but the delightfully warm weather of the past fortnight is said to have helped the farmers to a much greater extent than would generally be expected. Besides the very lateness of the season has caused farmers to push work as it has seldom been pushed before, and in this way they have overcome considerable lost ground. But what the future will be no one can tell, and on the future hangs the wheat situation of both to-day and to-morrow.

Everything is in just that state of unsettledness that arises from ignorance of what is ahead of one in any undertaking, and it is a condition that plays a large part in the buying and selling of grain. Prices of the present will vary according as the opinion is formed of what the crop in another six months will be. Prices for later purchase will be influenced in the same manner. And what the probabilities are, taking the wider range of this continent and foreign lands, is about as uncertain as when we come to consider only isolated districts or individual countries. When, however, we take the situation as it exists to-day with an undoubtedly large surplus still in hand on this continent, for as the New York Commercial Bulletin remarks, it is no longer possible to doubt that the estimate of the yield of 1892 was far below the actual facts, and carefully calculate from the data of crop conditions the world over, as far as available now, there is nothing to give very strong hope of any material increase in prices in the very immediate present, nor yet the near future.

A Chicago report to John J. Dixon, Toronto, as we close this writing, intimates that the local wheat market is seriously demoralized by reason of the uncertainty and apprehension that prevails in financial circles, and any fresh failure reported undermines legitimate influence. Of conditions abroad the same authority says cables are contradictory, some reporting continued drought while one reports rain.

CURRENT PRICES OF BREADSTUFFS.

WHEAT—Toronto: (West and north points)—White, 67 to 68c.; spring, 63 to 64c.; red winter, 67 to 68c.; goose, 62 to 64c.; spring, Midland, 67 to 68c.; No. 1 hard North Bay, 87 to 88c.; No. 2 hard, 85 to 86c.; No. 3 hard, 79 to 80c.; No. 1 frosted, 70 to 71c. Montreal: No. 2 hard Manitoba, 85 to 86c.; No. 3 hard, 82 to 83c. Chicago: 73⅝ to 73¾c.; July 76¾ to 76⅞c.; September, 79½ to 79⅞c. St. Louis: Cash, 70½c.; 73⅞c. for June; 73⅞ to 74c. for July; 75c. for August. Duluth: No. 1 hard 72⅝c. for May; 75⅝c. for July; No. 1 northern, 69⅝c. for May; 72⅝c. bid for July. London, Eng.: Beerbohm says: Floating cargoes—Wheat steadily held; maize nil. Cargoes on passage—Wheat, steadier; maize, very firm. Weather in England very hot. Liverpool—Spot wheat firm, but not active; maize, not much demand. Liverpool—Futures —Wheat, firm; maize, steady; red winter, 5s. 11d. for May; 5s. 11½d. for June; 6s. 0¾d. for July; 6s. 1¾d. for August; 6s. 2¾d. for September; 6s. 3¼d. for October. Paris—Wheat, 21f. 90c. was 21f. 70c. for June; 22f. 60c. was 22f, 50c for July and August; flour, 48f. 10c. was 47f. 60c. for June; 49s. was 48f. 70c. for July.

BARLEY.—Toronto: No. 1. 41 to 42c.; No. 2, 37 to 37½c.; No. 3 extra, 34 to 35c.; No. 3, 30 to 32c.; two-rowed, 54 lbs., averaging about No. 3 extra in color (outside) 32 to 37c. Montreal: Feed barley, 42 to 43c. American barley markets are practically nil. Oswego says: Canada barley market quotations not procurable in the presence of a nominal market; no arrivals.

OATS.—Toronto: Held firm, but few sales. White sold last at 34c. and on spot 37c. was bid; 38c. asked. Montreal: Per 34 lbs., 38c. to 39c. Buffalo: No. 2 white, 39½c. clipped, 41c. Oswego: quiet; extra No. 1 white, 42c.

PEAS.—Toronto: not very active; some sales at 59c. north and west.

RYE.—Toronto: Nominal 55c. outside. Montreal: 57 to 58c.

BUCKWHEAT.—Toronto: No movement; 50c. outside.

NEWS AND NOTES.

Wm. Paul, of Toronto, having passed a successful examination for grain inspector, has been granted a certificate. He was the only candidate to appear before the Board of Arbitrators in grain for Ontario, the members of which are: George A. Chapman, H. N. Baird, Thomas Flynn, W. D. Matthews, J. C. Carruthers and L. A. Tilley.

Geo. A. Dickson, of Toronto, who died at the age of 82 years on the 13th inst., was in his early years engaged in grain and milling in and about Richmond Hill. He was for several years collector of inland revenue and for nineteen years chief officer of weights and measures.

Secretary C. B. Watts, of the Dominion Millers' Association, reports through the last weekly Bulletin, "One thousand sacks of choice 90 per cent. patent flour sold at equal to $3.50 per bbl. in wood, f.o.b.

FIRE APPARATUS FOR A MILL.

IT may be handy to know, says a contemporary that about 65 pounds water pressure at a nozzle will be required to throw a one-inch stream 150 feet horizontally with a single length of hose, 70 pounds pump pressure at the nozzle. Seven to nine pounds must be for each 100 feet of hose, and the diameter of the hose used has considerable to do with the result. To maintain 50 pounds pressure at the nozzle and throw water 125 feet horizontally or 79 feet vertically through 100 feet of hose will require 67 pounds pressure at the pump. For 200 feet of hose 84 pounds pressure; 300 feet, 101 pounds; 400 feet, 118 pounds; 500 feet, 135 pounds; 600 feet, 152 pounds; 700 feet, 169 pounds; 800 feet, 186 pounds; 900 feet, 203 pounds; 1,000 feet of hose, 220 pounds pressure will be required. By using the above data when setting up a fire pump, the reader will not be in the predicament a mill owner recently found himself. The pump and connections were erected and upon testing the stream through 300 feet of hose, it was found that sufficient power could not be had at the pump to throw the water 20 feet beyond the nozzle.

MONOPOLIES.

IT would seem that modern monopolies are not without their historic ancestors. They have simply evolutionized in dimensions and faded in their original modesty. The first concepts were local and limited, every pea having its rink in a special thimble; the latter edition has no such waistband, but has all the planet on which to live and move and have its spoils. The difference between the sixteenth and nineteenth centuries in their monopolistic histories is simply a matter of degree. The cockatrice is still in the egg. In the days of the Tudors patents to deal exclusively in particular articles were so lavishly bestowed on courtiers and royal sycophants that scarcely a commodity remained free. They extended to salt, leather and coal, and only made a respectable halt by the bread basket of the people. Even Lord Bacon, the legal luminary of the times, handed over to a pair of fortunate barons the exclusive manufacture of gold and silver lace, giving the dainty patentees the right to search houses and also to arrest any person alleged to be an interloper in the trade. Is the modern coach traveling the same road?

NOTES AND QUERIES

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column. Correspondents need not give their own name for publication, but it must be made known to the editor. Anonymous communications will find space in the waste basket.

No. 37. BUYING A BOILER.—The advice of the MILLER is not unfrequently asked concerning the buying of a new boiler. Consult a firm of known ability and character is advice we never fail to give. There is no economy in the simplest purchases of life in trying to save a few cents in huying the cheap and nasty. But the disaster that may befall unwise buying is not the same in all cases. Where a boiler is needed is a case where it is difficult to say what may be the outcome of "a penny wise and pound foolish" policy. A writer in the Safety-Valve puts the matter tersely in these words: "If you want a brick wall built or a well dug, it's a good plan to advertisc for bids and let every mason and well-digger in town compete. The most irresponsible and conscienceless boiler-maker is sure to get the contract, and you'll have no end of trouble with your new boiler. A little consideration will assure you that boilers can not be made for less money than is asked by those who make hoilers of standard quality, and who could not afford to deliver a boiler of poor material and faulty construction, bccause it would injure the reputation of their work and workmanship."

No. 38. CHALK AND GREASY BELTS.—There arc many places where leather belts are used so greasy from drippings that can not be well prevented, from flying oil and spray, or from other unavoidable causes, that they become thoroughly saturated with grease, so much so that they become very inefficient and practically useless unless the grease is washed off or otherwise removed. It is said that a belt so disabled can he best renovated by the use of common chalk. Take a large piece of chalk that will cover the width of the belt, and hold it against it while running. The chalk takes up the grease as it is worn of hy the friction of the belt. After chalking awhile, take a scraper and hold it against the belt in such a manner as will scrape the accumulated mixture of chalk and grease all off, and then renew the chalking operation, and keep repeating until the belt is in good working condition, when the cleaning process can be discontinued until it hecomes dirty again. This is a simple remedy, and is by some considered the best way for keeping greasy belts clean and in good working condition.

No. 39. THINK BEFORE YOU ACT.—Not a month goes by that we are not reminded, as we worry through some hundreds of newspapers, from all parts of the country, of the many accidents occurring in mill and factory—solely through carelessness. Scores of these are so serious that we are surprised that the carelessness continues, but no sooner is warning sounded on one hand than an accident occurs on the other from almost a like cause. We are moved to write in this strain by a letter from a correspondent detailing and bewailing, as well he might, an accident, the result of simple carelessness, that had come immediately before his notice. To further illustrate what we have been saying, we shall quote here from a forceful paragraph that has come to our notice in a technical exchange. It is this: "Prompt action may avert a catastrophe, but thought as to cause and effect must come a little ahead of action, otherwise more damage than good may follow. I have in mind a young oiler in an electric light plant, who, being in a hurry to fill his oil cups, that he might be relieved for supper, grabbed an oil can in each hand and inserted the spouts on cups with different bearings at the same time. He immediately lost all appetitc for supper. Another case, in which a poor fellow lost his life. A heavy belt commenced to slip. He grabbed a can of resin, and, running under the belt threw a great quantity of the dry resin, some of it in large lumps on the belt, which resulted in throwing the belt from the pulley, which struck him on the head and threw him into the fly-wheel of the engine." Carc, care, constant care, that etcrnal vigilance that we sometimes talk about, is the only recipe against a continuance of these sad casualities.

LINKING BELT FOR SLOW MOTION.

AS is well-known by all practical men, belting in general use is not well adapted to slow motion uses, or for driving any machine or piece of machinery that has a very slow motion. Nor is it always convenient to drive such with gear wheels, even if it were desirable to do so, which, as a rule, it is not. As a substitutc for both no better can be found than chain, or what is commonly called "link belting." It is well adapted to the purpose and as reliable as gear wheels, there being no possible chance to slip or run off the wheels.

FOREIGN LETTER BOX.

ENGLAND.

GRAIN men and millers on this side of the water are discussing the probabilities of the wheat crop in America, and an impression is quite general that the crop will be lighter than that of a year ago. It is not thought, however, that even with a lighter crop the situation will be much, if any, improved. The quantity of wheat afloat, and the large supply that, it is believed, is still in hands in America, is thought to be sufficient to keep prices down to a low average. The flour market is as lifeless as ever, with supplies of low-grade American flour on hand that is depressing to the trade.

BUDAPEST.

An improved tone is to be remarked of milling matters at the Pest. No remarkable activity can be noted, but a more settled feeling prevails. Wheat is firmer, and this condition is having a favorable influence on the flour market. Considerahle exports are going forward to Brazil. 93,135 bbls. of flour have been shipped from Budapest for week ending April 8th.

RUSSIA.

A spell of cold weather has had an injurious effect on the crops in some sections, and this has had a tendency to increase prices. And yet the stiffening is not very noticeable, so far at least as wheat and maize is concerned.

DULUTH.

The general growth of flour production at Duluth and Superior continues as encouraging as ever. The output of the mills is large. Compared with the output of a year ago they stand something like this: 40,000 to 45,000 bbls. per week has been the output of the past few weeks, where only about 16,000 bbls. a week is the record of the same period a year ago. Nothing very hopeful, however, can be written of values. They are desperately low, and there does not seem to be any visible signs of immediate improvement. Competition is keen, and no one appears to he in position to hold stocks for any length of time, a circumstance that has a tendency to continually keep prices down to a low level.

MINNEAPOLIS.

Conditions jog along as they have been doing for some time now. A fairly large output is the record of the mills each week, and yet the past week has shown a decrease as the result of severalof the mills being closed down. The output was 134,615 bbls., where for the week before the figures were 179,240 bbls., 178,450 bbls. the result of the corresponding week in 1892, and 125,190 bbls. in 1891. Not since the last week in December has so small an amount of flour heen made by Minneapolis mills. A fair export trade is being done, but with the glut of flour in the European markets prices are not very profitable.

BOSTON.

Millers at the Hub arc disposed to grasp the situation with a vigorous hand. They see neither sense or fun in selling flour at the unprofitable prices that have been prevailing lately, and have put prices up. They are not doing any business at the advanced rates, but they have the satisfaction of knowing that they are not putting in a lot of labor and receiving nothing in return.

STEAM CEMENT.

MANY times little occurrences come up in an engineer's practice where some kind of cement which will stand the heat and pressure of steam can be used to excellent advantage. Perhaps a blow hole in the casting opens up and a stream of steam or water escapes. In such a case it would be most desirable if there was some cement handy which could be put upon the defective spot and would set within a few moments and afterwards remain tight. Many other circumstances often come up where a good cement that would set solid and strong would be found most useful. To be sure, one of the best ways of fixing such things when they occur is to replace the defective by new material, but as this cannot always be done without the expenditure of more time and trouble than is convenient to give it, something that will serve a good purpose instead is desired. A contemporary gives the following recipe for a preparation which, we think, will be found quite useful, as we have often used a cement of similar composition to this: Five pounds Paris white, five pounds red lead, four pounds black oxide of maganese. The whole is to be well mixed and a little asbestos and boiled oil added. This cement will set hard in from two to five hours, and it is not subject to expansion and contraction to such an extent as to cause leakage afterwards. Leaks that occur in places which are difficult to get at and remedy, may often be stopped by the application of a little cement composed of the above materials in about the proportions specified.—Tradesman.

WHAT COMES NEXT?

By C. A. SMITH IN "MILLING."

WHAT will be our next improvement in methods of milling? is a question that has often suggested itself to our progressive millers. There has been practically nothing new developed during the last decade. We have simply made some minor improvements on the acknowledged methods, and for a time a little going backward among the short system millers, which seems to have spent its force wherever a high standard of excellence is sought. There has been, of late, more attention paid to a greater thoroughness in the matter of wheat scouring. This has been in the right direction and seems to be the first step to what I think will be the coming change, namely: The decorticating of the wheat berry before any attempt at reduction is made. The decorticating of wheat is not, of course, a new idea. It was tried and discarded more than twenty years ago, but under conditions very different from those now prevailing. At that time the machines used were very cumbersome and required a large expenditure of power, the waste was large, wheat was high, $1.50 to $2 per bushel, there was but little or no demand for feed, it would not bear the cost of transportation and could be used only locally. The grinding was done on buhrs, and purifiers were unknown and, while the quality of the flour was vastly improved on the whole, it proved a failure. But the conditions have very materially changed, and I confidently look for the introduction of decortication within the next two years—perhaps within a short time. Cleaning machines are already in the market that successfully remove the outer coating of the berry, the so-called "beeswing bran," without waste and with little power, and a slight improvement on the cases of these machines, which is entirely feasible, will remove the inner coating. We shall then have only the crease bran to contend with. This from its nature, being a long thin strip, I believe can readily be removed after the first reduction and afterwards treated by itself. It seems to me that after decortication, the first break should be made under a slight pressure of the rolls with corrugations of about sixteen to the inch and with but very little differential, say one and one-eighth to one, so that the crease bran may be as little disturbed as possible. The other manipulations would be practically the same as those now followed, except that the low grade would be made at the head of the mill out of the scouring of the last decorticating machine. Under such a process, as above indicated, we may look for an increased per cent. of first-class flour and a yield of from 80 to 85 per cent. of a true patent, made of purified middlings, and I further believe that the porcelain rolls for middlings reduction will again come into use, taking their old place instead of the smooth iron roll. In my experience I have yet to see the production of the iron roll that would equal in quality the flour made on the porcelain roll when rightly handled. It must be remembered that in the day of the porcelain rolls they were necessarily in very green hands, our millers were not used to rolls of any kind, and they had from the inexperienced hands a terrible banging and overcrowding. This they could not stand as well as the iron roll, hence their apparent failure—or rather say impracticability. Few millers today could hold their positions long if they treated their iron rolls in the manner in which the porcelain rolls were served. There is a peculiar granulation made on the porcelain roll, that while very fine still seems to keep its individuality and give a fine character to the flour.

DRY STEAM.

IT is probably only a question of another 10 or 15 years before engineers generally will again be using slightly superheated or dry steam, not only in land engines, but at sea and with locomotives. Modern ideas favor the change, and the economy which will be obtained by preventing the large amount of condensation now going on in steam cylinders. The presence of water is acknowledged to be uneconomical and injurious. A steam jacket is only a simple means of raising the temperature of the cylinder metal touched by the steam. For the maximum economy it is important to increase the temperature of our cylinders, and this is precisely the effect of superheated steam, the result being that there is much less condensation.

CANADA.

—Loux & Co., of Duncansville, Que., will build a new grist mill this summer.

—Rounthwaite, on the Northern Pacific Railway, in Manitoba, is agitating for a grist mill.

—McKay & Co., of Toronto, have recently shipped 5,000 bushels of oats to the Island of Barbadoes.

—Manitoba wheat is being shipped to different points in Dakota and Minnesota for seed purposes.

—Prof. Shaw, of the Ontario Agricultural College, Guelph, Ont., says that the demand for seed grain is enormous.

—D. McLean, miller, for some time past at Fraser's mill, Man., will establish a pump business at Plum Creek.

—A by-law granting $4,000 for the erection of a roller grist mill at Marquette, Man., has been carried by a large majority.

—The sheriff is in possession of the assets of Wm. Farrish, miller, at Rockwood, Ont., who was believed to be in a good position.

—Fenwick's elevator at Alexander, Man., was destroyed by fire on 4th inst. It contained 30,000 bushels of wheat. Total loss about $25,000.

—Robert Clarke, of Ottawa, who has purchased the grist mill at Shawville, Que., intends overhauling the mill and putting it in first-class shape.

—Millwrights are busily engaged on the large mill of the Ogilvie Milling Co., at Winnipeg, Man., enlarging and making important improvements.

—Geo. Dow will open a flour and oatmeal store at Pilot Mound, Man. He is a practical miller, formerly connected with the Pilot Mound mill.

—The body of a man named Joseph Bower, a hostler, about 50 years of age, was found below the mill dam of Sadler, Dundas & Co., Lindsay, Ont.

—Large quantities of grain are coming down the Lachine canal for export to the old country. 353,755 bushels represented one day's totals a week ago.

—The large grain warehouse of Jacob Betzner, of Breslau, Ont., was destroyed by fire on 3rd inst. It contained about 1,200 bushels of barley and 400 bushels of oats.

—The new flour mill to be erected at St. Jean Baptiste, Man., is to have a capacity of 200 barrels per day, and an elevator of 50,000 bushels is also to be constructed.

—The assets of Campbell & Green, grain commission dealers, Portage la Prairie, Man., are said to be all held, under mortgage, as security, by the Commercial Bank. Liabilities are $18,000 to $20,000, according to last advices.

—J. W. Cochrane, of the Crystal City flour mill, has sold out his business to the Hon. Thos. Greenway, and intends constructing a mill this season of 150 bbls. capacity at Glenboro, Man., which he will operate when completed.

—The Pioneer Oatmeal mill, of Portage la Prairie, Man., is shipping considerable of its product to Liverpool, Eng. The Pioneer Company say they could regularly dispose of large shipments if the proper kind of oats could be secured in the vicinity.

—John Williamson, of Hawkestone, Ont., was drowned a fortnight ago. He went out to his mill dam, and whilst raising the flood gate a lever struck him, stunning him and knocking him into the flume. His body was found some three hours afterwards.

—A Lindsay, Ont., grain dealer, has returned from Winnipeg, where he has been operating during the past winter. He says that the fine weather of last autumn was favorable for farm work and that 50 per cent. more land has been prepared for wheat. If there is a good harvest this year he expects the production to be 30,000,000 bushels.

—On the 6th inst. a partially successful attempt was made to blow up the grist mill at Lyndhurst, Ont., by dynamite. The wing walls which guide the water into the flumes were entirely blown away, and will cause a suspension of business. It will cost about $2,000 to repair the damage. No clue of the dynamiters has been found.

—In November, 1891, Mr. F. B. McKenzie shipped 1,000 bushels of No. 2 hard wheat by the Northwest Transportation Co. from Duluth to Sarnia for orders. In transit this wheat was mixed with 10,000 bushels of rejected and no grade wheat, and the Transportation Co. refused to indemnify Mr. McKenzie for his loss. Since that time the matter has been in the courts, Mr. McKenzie this month receiving judgment for full liabilities.

GENERAL.

—Last year 8,000,000 bushels of grain were handled at Ogdensburg's single elevator.

—The average cost of water power for flour making in Minneapolis is from 2c, to 2½c. per barrel, and of steam power from 6c. to 9c.

—Corn, cereals, meats and flour, of all kinds, are now virtually excluded from all parts of Mexico, save the narrow strip of country called the free zone, on account of a prohibitory tariff.

PERSONAL.

Mr. A. Atkinson, president of the grain exchange, of Winnipeg, Man., has received an invitation from the World's congress auxiliary to act as one of the advisory committee in the department of commerce and finance.

One of the enterprising millers of the province is Mr. Jas. Hamilton, of Glen Huron, Ont. He became a resident of the Glen in 1873. Noting the natural advantages of the place in the way of water power he erected a grist mill. Later finding this a success he built a saw and shingle mill, a stave factory and a cheese factory. Mr. Hamilton has always taken an active interest in the affairs of the Dominion Millers' Association, being a member of the executive.

TRADE NOTES.

The MILLER has received from Dick, Ridout & Co., the well-known manufacturers of jute and cotton bags, a sample scrap bag, which they are presenting to their friends, and which placed in a convenient spot serves as a useful office adjunct. Printed on the bag are these words: "If you want satisfaction in quality, price, printing, prompt and careful shipment send to Dick, Ridout & Co., for all your bags." The faithful daily practice of these important business principles has had a considerable share in giving to this firm the gratifying success they have for years enjoyed.

The following letter speaks for itself: "Fall River Line, between New York and Boston, on board steamer 'Plymouth,' New York, April 29th, 1893, Magnolia Anti-Friction Metal Co., New York. Dear sirs—In answer to your enquiry as to our experience with the Magnolia Metal, we desire to say that we have it in the intermediate crank pin brasses of the Plymouth, and it has given us every satisfaction, and from our experience with it we cheerfully recommend it for such work. Yours very truly, B. J. Benson, Chief Engineer, S.S. Plymouth."

CHAFF FOR THE DUSTIES.

—To prevent tools from rusting, use 'em.

—At many deals in corn there are signs of a-maize-ment.

—A depression in the market generally "goes against the grain."

—It is a philosophical fact that bad flour makes people ill-bread.

—The "flower of the family" is not necessarily household flour.

—When a miller does not give oats to his horse he generally "makes a meal of it" himself.

—Treat your competitor's customer cordially. He may come your way later on.

—The strongest man in the world is the one who can best control himself.

—Cogwheel wants to know if a load of flour can be said to be properly discharged when it gets the sack?

—However "fresh" an overdressed miller may be, some people are sure to say he is mill-dude.

—The farmer who managed to scare all the crows from his fields, now alludes to the birds as "the lost caws."

—Whenever a miller gets it into his head that he is destined to make a mark in the world, he at once goes to mark-et.

—"Papa," said a talkative girl, "am I made of dust?" "No, my child. If you were you would dry up once in a while."

—It is strange, but true, that some men will not learn to do things by reading the experience of others, seeming to have a horror of printed milling information as experience.

—When Polly saw a little colored baby for the first time, a week or two ago, she ran into the house, and called to her mother: "Oh, mamma, come quick!" she cried. "Here's a live baby all made out of chocolate."

In a cornfield tell no secrets,
For remember, corn has ears,
And 'tis also shocked so easy,
That 'twere best it nothing hears!

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ONTARIO AND MANITOBA WHEAT FOR SALE

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GRAIN and COMMISSION Merchant

ONTARIO AND MANITOBA WHEATS IN CAR LOTS

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FLOUR, GRAIN MILLFEED

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Send large samples and quote prices . . . .

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MYERS' ROYAL CATTLE SPICE

TESTIMONIAL.

DEPARTMENT OF AGRICULTURE, ONTARIO, Toronto, March 17th, 1893.

Gentlemen,—We have used Myers' Royal Cattle Spice during the present winter with both cattle and sheep. It seems to be equally valuable for both. I noticed especially the benefit on a lot of yearling rams. The change in their appetite and appearance was easily perceived after the first week or ten days' feeding, and they have steadily and rapidly gained since.—Yours very truly, (Signed) JOHN DRYDEN.

Messrs. Myers & Co., Toronto.

DUST! DUST!

Gibbs' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust. Invaluable to operators in every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel plated protector by mail, $1.00; postage 5c. Circulars free. Agents wanted.

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ROLLED OATS STANDARD —AND— GRANULATED OATMEAL

MADE FROM SELECTED WHITE OATS.

Special terms made with Flour Millers for re-shipment with carload flour.

D. R. ROSS EMBRO ONT.

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STEAM PIPE AND BOILER COVERING

Saves enough fuel to pay for itself in one season.

Is Fire-proof, Frost-proof, Vermin-proof and Indestructible

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TO MILLERS AND GRAIN EXPORTERS.—Advertiser wishes to represent a good miller or grain merchant in the London market on commission; references exchanged. J. H. BAILEY, Sr., Brentford, London, England.

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"NATIONAL ROLLER MILLS," BRUSSELS, Ont.; capacity 100 barrels per day. Cheap, easy terms of payment. Address

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ESTABLISHED - 1885

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The President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said: I have much pleasure in drawing your attention to the fact that this company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

Up to the present time the insurers with this company have made a saving, when compared with the curreent exacted rates, of $91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to $21,522.72.

Besides achieving such result, we now also have, over all liabilities—including a re-insurance reserved (based on the Government standard of 50 per cent.—(50%), a cash surplus of 1.93 per cent. to the amount of risk in force.

Such results emphasize more strongly than any words I could add the very gratifying position this company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report.

The report was adopted, and the retiring Directors unanimously re-elected. The Board of Directors is now constituted as follows: James Goldie, Guelph, president; W. H. Howland, Toronto, vice-president; H. N. Baird, Toronto; Wm. Bell, Guelph; Hugh McCulloch, Galt; S. Neelon, St. Catharines; George Pattinson, Preston; W. H. Story, Acton; J. L. Spink, Toronto; A. Watts, Brantford; W. Wilson, Toronto.

HUGH SCOTT, Mgr. and Sec'y. THOS. WALMSLEY, Treasurer.

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AND INDEX TO THE PLANING MILLS
AND SASH AND DOOR FACTORIES
OF CANADA. . . . . .

THE Publisher is now open to receive subscriptions for the above Directory of the lumber trades. No effort is being spared to make this publication thoroughly complete and reliable in every detail, and it is hoped that all MILLER subscribers interested in the manufacture of lumber, staves, heading, etc., will write at once for particulars. It will cost nothing to have name and business inserted in Directory. Blanks and all particulars sent on application.

Address all communications to

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CANADA LUMBERMAN,
TORONTO, ONT.

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Port Huron and Detroit
Is the Short Line to
SAGINAW AND BAY CITY
(Centres of the vast lumber interests of Michigan)
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AND
MILWAUKEE AND MANITOWOC, WIS.

The last two named are reached by the Company line of Steamships across Lake Michigan.
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The book contains more valuable information and useful tables for Farmers, Millers, Traders and others than any similar book of its kind ever published, besides being a complete Ready Reckoner showing the value of articles or lbs. from one to 500; from a quarter of a cent to $2.00. Also tables for Grain, Hay, Rent, Board, Wages, Interest, etc.

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ROBIN & SADLER
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AYLMER MILLS
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"THAMES"	
"ELGIN"	
"SWEET HOME"	Second Grade Flour
"BUDGET"	Low Grade Flour
CORNMEAL	Straight Kiln-Dried
	Granulated Sunrise, Kiln-Dried
BEANS	Prime Medium
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Middlings, Bran, Corn, Chopped Feed

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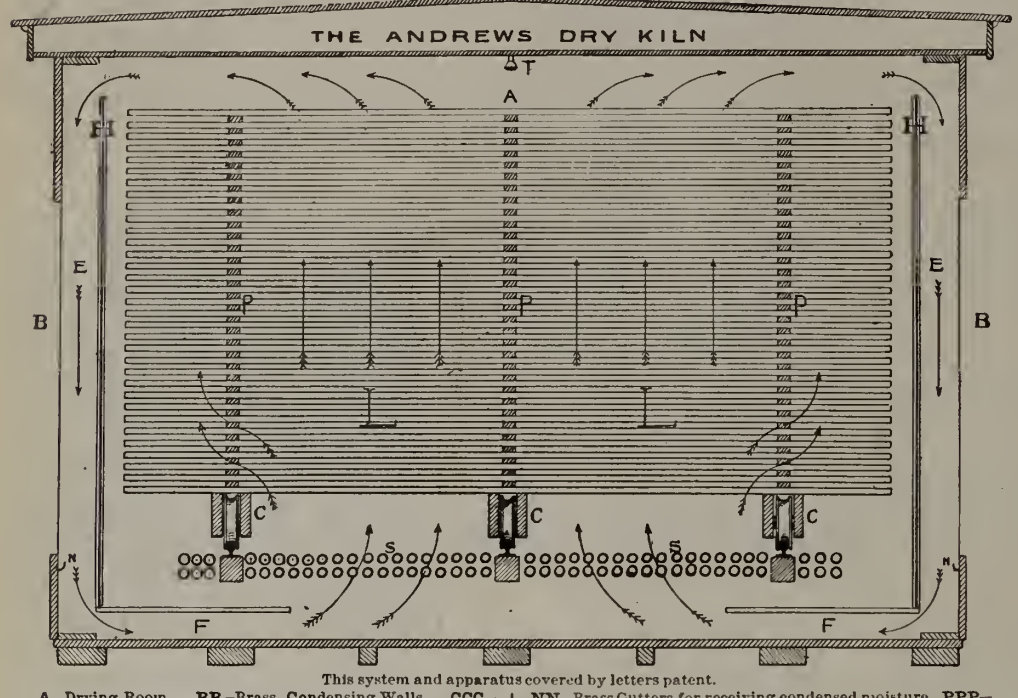
For Lumber, Shingles, Staves, Heading, etc.



This system and apparatus covered by letters patent.

A—Drying-Room. **BB**—Brass Condensing-Walls. **CCC**—Lumber Cars. **EE**—Down Air-Flues. **FF**—Bottom Air-Flue. **HH**—Inside Walls, protecting metal from heat. **LL**—Lumber on cars. **NN**—Brass Gutters for receiving condensed moisture. **PPP**—Sticks between lumber. **SS**—Double Steam-Coils. **T**—Automatic Steam Fire-Extinguishers. Arrows show direction of currents of air.

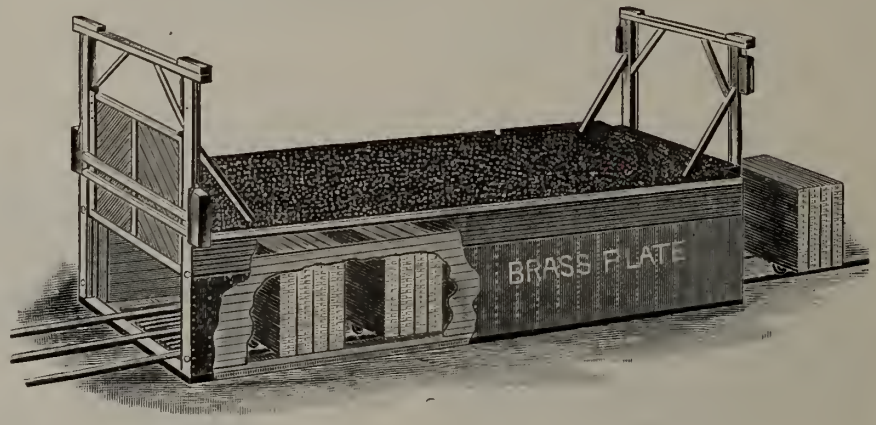
THIS DRYER

HAS PROVED TO PURCHASERS TO DO WHAT IS GUARANTEED IN SAVING THEM MONEY IN

Freight, Insurance, Time, Interest, Expense, Capital, Yard Room, Labor

There may be persons who do not appreciate the advantages of the artificial drying of lumber. But the shrewd men, in the manfacture of furniture and other woodwork where reputation would be sacrificed by a lack of proper m terial for good gluing and finishing, recognize a good system of drying as an important element of their success. High scientific authorities and thoroughly practical men are now agreed that the hot-blast and rapid-current systems ARE WASTEFUL, and that steam heat is the only safe means for artificial drying. The mode of applying steam heat most efficiently and economically is therefore now the essential point. The Andrews Dryer accomplishes this result more surely than any other known system.

NO FAN NO ENGINE
NO SMOKE NO CHIMNEY
NO SPECIAL FIREMAN OR FUEL
NO EXPENSIVE BRICKWORK
NO RISK OF FIRE
NO CHECKING OR WARPING
NO CASE-HARDENING
. . . . **NO EQUAL** . . . .



Outside View of the Andrews Progressive Kiln, showing Lumber placed crosswise the building, on cars.

'WE PUT GREEN SPRUCE IN DRIPPING WITH WATER, AND IN EIGHTEEN HOURS IT WAS DRYER THAN LUMBER THAT HAD BEEN STUCK UP IN THE YARD ALL SUMMER."

This is the verdict of a Quebec lumber firm, and we can give equal results every time.

The Andrews Lumber Dryer

Has been proved to possess the following points of excellence:

1st. That its drying is rapid and perfect.

2nd. That external and internal checking and discoloration are entirely avoided by this method.

3rd. That the drying is done by a CONTINUOUS system and the temperature of the kiln is under absolute control at all times.

4th. That our Dryer is free from the varying air currents (always wasteful) incident to all fan and open-draft kilns.

5th. That our drying is done by the slow continuous movement of a large body of slightly-moistened air.

6th. That our condensing surface is so very large as to be adequate to precipitating the moisture of the saturated air with the least amount of movement.

7th. That our piping is tested by high pressure and every outfit is fully guaranteed.

8th. That by our improved system of drainage the freezing of pipes becomes impossible.

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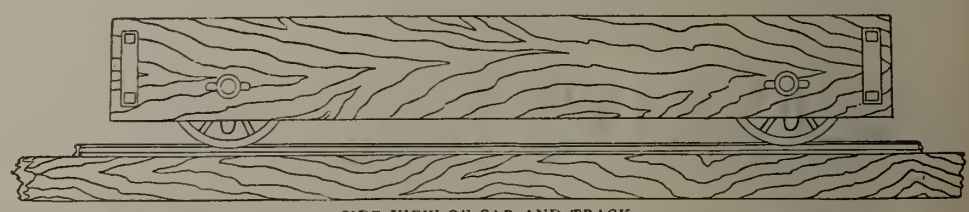
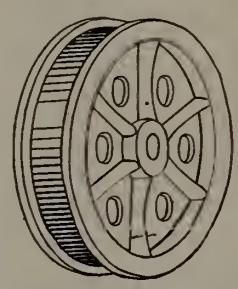


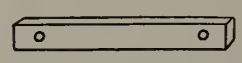
SIDE VIEW OF CAR AND TRACK.

DOUBLE FLANGE WHEEL ON SINGLE TRACK

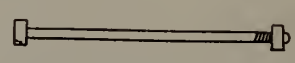


CAR WHEEL, DOUBLE FLANGE

SECTION OF CAR TRUCK, SHOWING AXLE BOX.



STRAP WASHER



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Unsurpassed for Uniform Quality

GREENFIELD MILLS ✠ AYR, ONT.

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Daily Capacity 500 Barrels

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STRONG BAKERS
LOW GRADE
From No. 1 Hard
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FAMILY FLOUR
LOW GRADE
From : :
Best Ontario Wheat

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In car loads or mixed cars, delivered at any railway station

Send for samples and quotations

Royal Mills, capacity 1,800 bbls.
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DAILY CAPACITY

7,100 BBLS.

HIGHEST QUALITY

Hungarian Patents
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FLOUR

FIRST PRIZE, DIPLOMA AND GOLD MEDAL, EXHIBITION, JAMAICA : : : :

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THE NORTH AMERICAN MILL BUILDING CO.

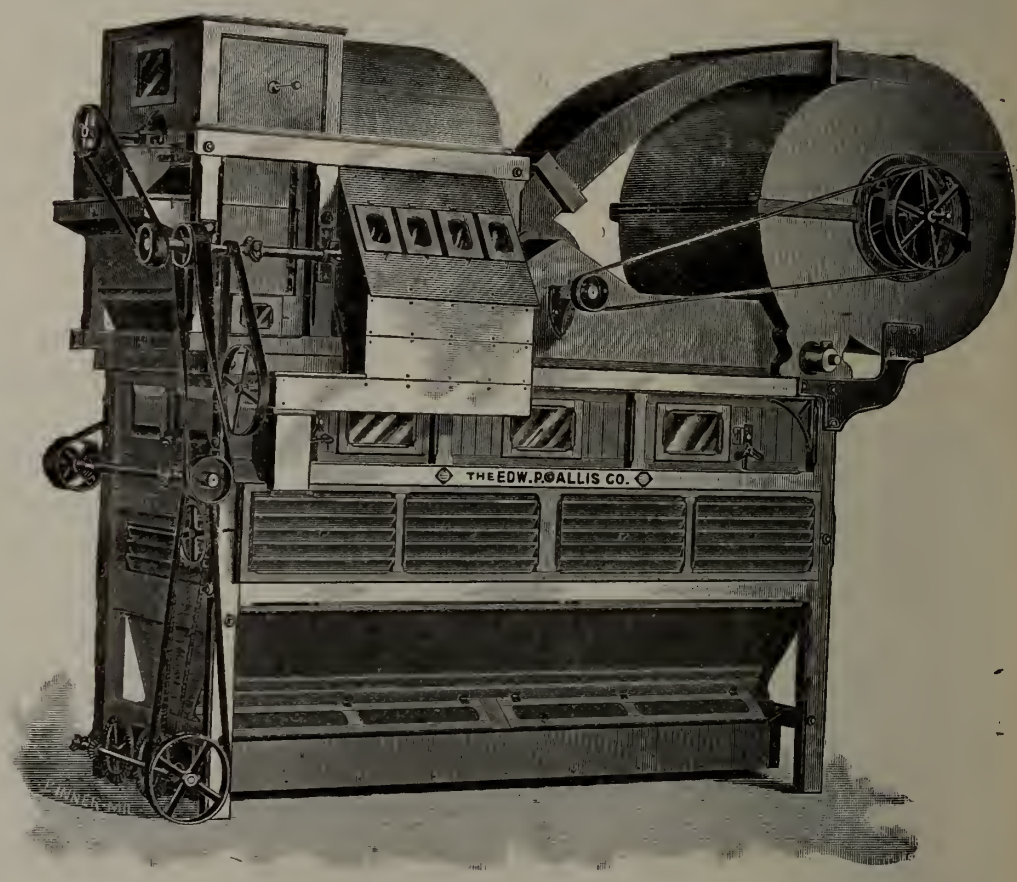
STRATFORD, ONT.

MANUFACTURERS OF

MODERN FLOUR MILL MACHINERY

On both Smith and Allis Systems

THIS engraving shows a Reliance [sieve] Middlings Purifier surmounted on the front by Reliance Air Purifier and on the rear by a Reliance Dust Catcher, making three machines in one, all driven by one belt and using only the floor space required for the Sieve Purifier alone. The middlings, as they issue from the Grader, are introduced to the Air Purifier which removes the loose bran particles, fuzz and dust, and the middlings then pass to the Sieve Purifier, where they are graded and re-purified, and the bran specs of equal gravity to the middlings which were not removed by the Air Purifier are now removed by the combined aid of the cloth and the graduated air suction of the Sieve Purifier. The impurities from the Air Purifier and from the Sieve Purifier are discharged separately. The Air Purifier returns its own air, and draws none from the outside. The Reliance Dust Catcher discharges its own air into the room. The removal of the impurities from the middlings by the action of the Air Purifier, relieves the Sieve Purifier of the hardest work and gives it greatly increased capacity.



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As a System exclusively using a separate Purifier for each grade of middlings

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TWO FAVORITE Horizontal Cleaners:

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Eureka Special Close Scouring Horizontal Smutter

Unequalled
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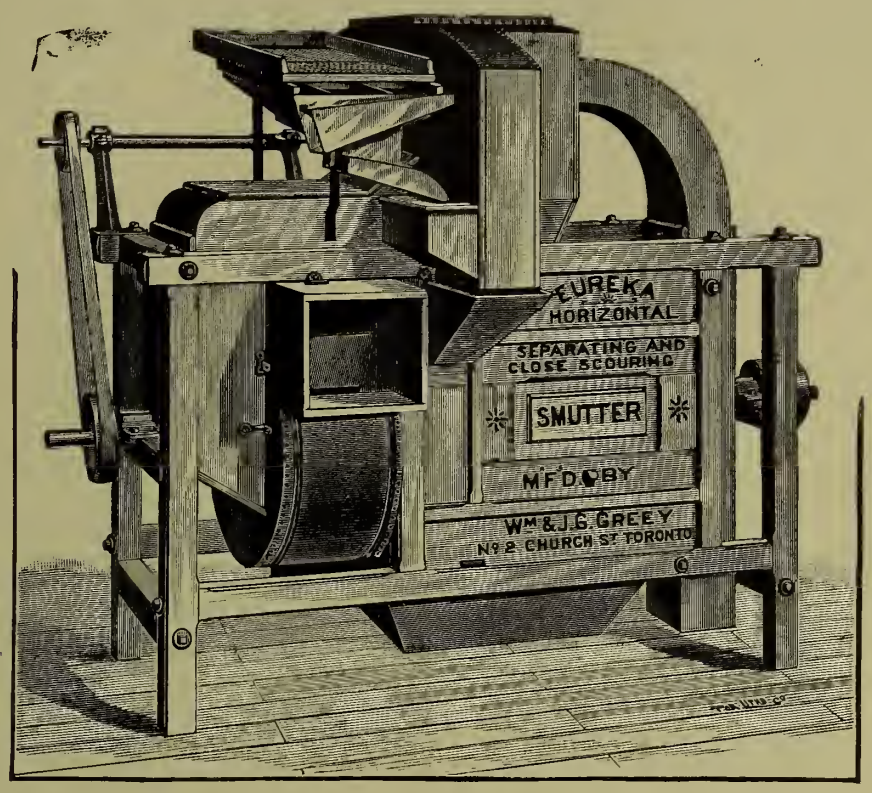
Dirty Wheat



Perfect Ventilation
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Simplicity
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Ease of Operation

MADE IN
EIGHT SIZES

AND

Greey's Horizontal Bran, Shorts and Tailings Duster

RUNS
so slick and easy

PERFORMS
its work so thoroughly

ADJUSTABLE
while running

DURABLE
EFFICIENT
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MADE IN
SEVEN SIZES

The work performed by these Machines produces

A CONTINUAL FEELING OF SATISFACTION

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BAGS AND SACKS

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1876....	"	20.65	1886....	"	11.35
1877....	"	19.16	1887....	"	12.19
1878....	"	17.32	1888....	"	12.88
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1880....	"	12.65	1890....	"	11.91
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Total Paid in 20 years....$321.29

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HESSIANS or BURLAPS

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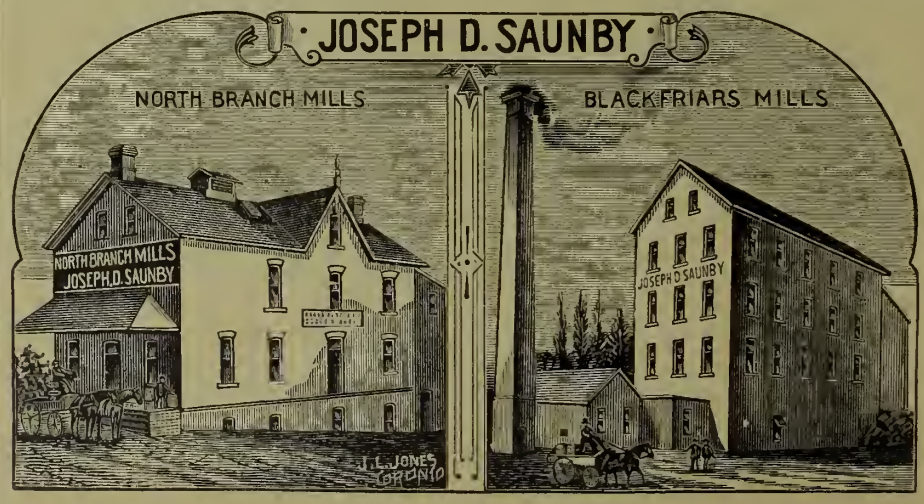

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Brands :

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Chopped Feed . . .

In whole or car lots mixed

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NEW SERIES "MECHANICAL AND MILLING NEWS"

OLD SERIES, VOL. XI. / NEW SERIES, VOL. III. } NUMBER 6. TORONTO, ONT., JUNE, 1893 { TERMS, $1.00 PER YEAR / SINGLE COPIES, 10 CENTS

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Our CYLINDER OIL IS IN USE IN ALL THE BIG MILLS . . . . . .

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THE GUTTA PERCHA & RUBBER MANUFACTURING CO. OF TORONTO.

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"BUDGET"	Low Grade Flour
CORNMEAL	Straight Kiln-Dried / Granulated Sunrise, Kiln-Dried
BEANS	Prime Medium / Hand-Picked Medium

Middlings, Bran, Corn, Chopped Feed

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ESTABLISHED 1856

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MONTREAL

BELTING

MANUFACTURED FROM

IMPORTED OAK-TANNED LEATHER

EVERY BELT GUARANTEED

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THE GOLDIE & McCULLOCH CO., LTD.

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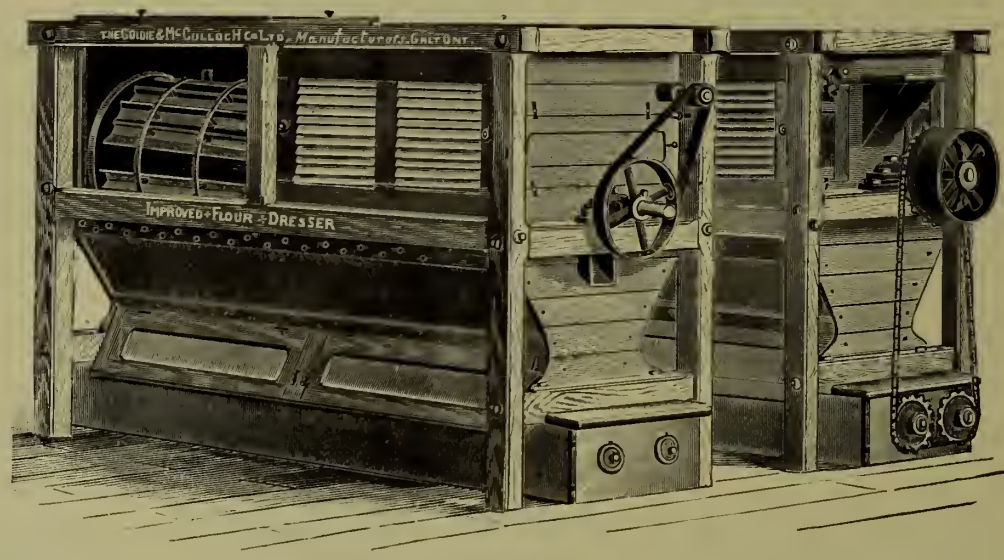
Flour Mill Machinery

Which they claim cannot be surpassed for general excellence of design, workmanship and material.

INTER-ELEVATOR FLOUR DRESSER



Manufactured by The Goldie & McCulloch Co., Ltd.

THE above Cut shows our improved Flour Bolt. The circular bolting reel is now rapidly taking the place of the old style hexagon one. In the hexagon reel the stock is lifted by the longitudinal ribs and dropped to the bottom of the reel, the violent agitation tending to break up any bran or other objectionablel matter in the stock, and thus make specky flour. The action of the circular reel is this—the lifters elevate the stock, sliding it gently out against the bolting surface down which it passes until again caught by the lifters and the process repeated, the clear flour passing through the cloth and falling into the conveyors, the remainder which does not pass through the cloth is discharged at the lower end of the reel. The great capacity of this bolt is due to elevation of the stock, so as to bring a large part of the circumference of the reel into action at once. The double conveyors placed side by side are accessible their whole length through the hinged doors at each side. Above these conveyors are placed reversible valves by means of which the material coming through any portion of the cloth can be directed to either conveyor, thus enabling the operator to cut off at any point.

New Mills Erected and Old Mills Remodelled
OF EVERY STYLE AND CAPACITY, UNDER THE SUPERVISION OF A THOROUGHLY PRACTICAL MILLWRIGHT AND MILLER.

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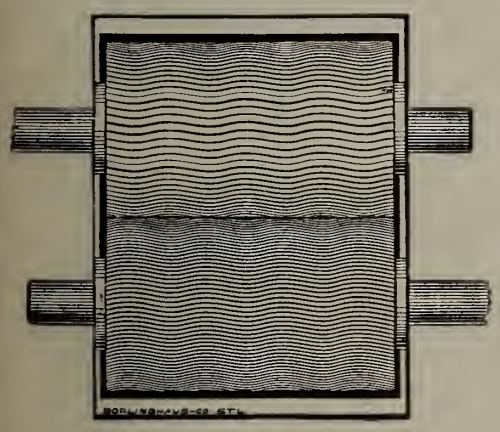

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THE CANADIAN MILLER

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PERFORATED BELTING.

ONE of the most unreasonable and unscientific fads, says a writer in the Mechanical Journal, is perforated belts. The advantage claimed for them is preventing air from accumulating between the belt and the face of the pulley, thereby decreasing its frictional power. This point is particularly urged in cases where a belt is run over a small pulley at high speed.

This theory is not only nonsensical, but contrary to all the laws which govern belt friction. The power of a belt, under any circumstances, depends entirely upon three conditions, viz.: speed, tension, and the amount of surface in contact. Belts running over small pulleys at high speed, under all ordinary conditions, must necessarily work to a certain disadvantage as compared with those running at comparatively slow speed.

In the first place, in order to obtain the best results, a belt should embrace at least one-half the circumference of the smaller pulley, but it is most frequently the case where high speed is necessary, the driving pulley is four times or more the diameter of the driven, and unless the conditions are such as to admit of considerable distance between the centres, and the slack side of the belt running towards the top of the driven pulley so as to utilize the sag of the belt, the speed will be such that not more than one-third the circumference of the small pulley is embraced; under such conditions it is highly essential that every atom of the surface of the belt as well as the pulley should be utilized.

It is a fact well known to belt users that the smoother and more perfect the face of a pulley is, the greater will be the friction power of the belt. There is no class of manufacturers who are more fully aware of this fact than the manufacturers of wood pulleys, and one of the greatest secrets of their success is in the careful manner in which their pulleys are finished. Why do the belt manufacturers always recommend running the grain side of a belt next to the pulley and claim an increase in power by that method? Simply because the grain side of leather, especially when new, is smoother than the flesh side, consequently presents a greater amount of frictional surface in contact with the pulley.

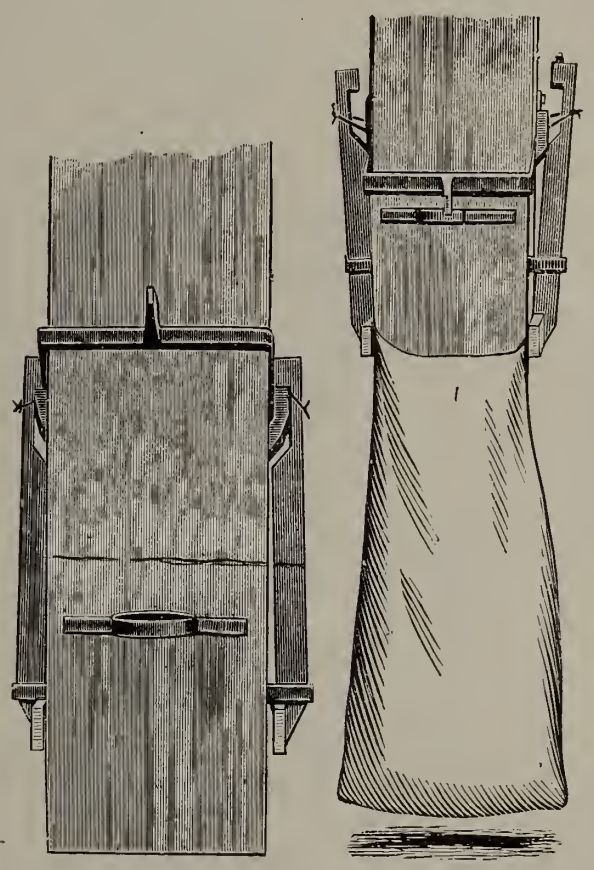
Now if the compressed-air theory is correct, and by perforating the belt and thereby depriving it of a part of its frictional surface, adds to its power, why not then, upon the same principle, perforate the face of the pulleys also by drilling holes in the rim?

The fact is plain to a close observer that the reason why fast running belts over small pulleys are more inclined to slip than those running at less speed, is not due to atmospheric influence, but entirely due to centrifugal force. A belt at high speed, passing over the face of a small pulley, is subject to the same laws which govern the pulley itself. The natural tendency of all revolving bodies subjected to speed beyond the tensile strength of the material of which they are composed, is to separate, and the several pieces to fly off at a tangent from the centre. Anyone who will observe the cylinder belts of a planing machine when running at its regular speed, will observe that the top or leading side of the belt, as it approaches the pulley, instead of hugging the pulley at the moment of approach, is thrown upward and outward; in some cases, especially where the belt is slack, it will not come into intimate contact with the pulley until it has passed a considerable distance beyond the top of it. This decrease beyond the arc of contact fully explains why such belts are more liable to slip over the face of the pulley. Wherever this decrease in the arc of contact and consequent decrease in friction becomes such that it is not equal to the resistance offered, the belt will run off, and the perforating of such belts can not possibly have any other effect than to decrease its frictional surface and consequently decrease its frictional power.

Where both edges of the belt are free and nothing prevents the air that may be carried along from escaping at each side of the pulley, how is it possible for sufficient air to accumulate under the belt to force it away from the face of the pulley? For this reason there can be no possible advantage in perforating a belt for either fast or slow speed, and the sooner that theory is abandoned the better. There are other claims for belting that are equally absurd.

A NEW BAG HOLDER.

HAVING experienced many complaints from customers, says Mr. A. Dobson in the American Miller, through the tearing of bags by the hooks and nails usually used on chop and bran spouts in the process of filling, I set myself to devise some means by which this objection might be obviated. After much experimenting I have succeeded in producing a bag holder, an engraving of which is given herewith, and which we have been



A NEW BAG HOLDER.

using in our mill with great satisfaction for several months. We believe that what is of so much use to us would also prove of use to others.

Cut 1 shows spout and holder without the bag; cut 2 shows the spout and holder with bag in position. All that is necessary to effectually hold the bag is to pull down the lever, and when the bag is full raise it, which releases it and allows it to drop to the floor. With this holder the bag can never be torn, while it is easier to work, there being no lifting or pulling required to detach bag from spout, as when hooks or nails are used. There is no patent on this bag holder.

A GOOD PLAN.

A SET screw on a moving part is a most dangerous thing, particularly if it is within reach. Why are they made to project about an inch above the surface? Why so much thread on a fixture that is as permanent as a key? We were taught many years ago to leave set screws only two threads above the surface of the job, and we think it is a good plan yet.

CAN A PERFECT MILL BE BUILT?

By W. T. Bates.

IT is really astonishing to me what some millers will do with all the new machinery they are reported to be so constantly buying. It has never been my fortune to be in the service of one of these open-handed gentlemen. I think I can with safety say that I have in all my milling career never seen more than about two new machines introduced in all the mills in which I have been employed, and I venture to think that my experience is somewhat singular in this age of rapid change and innovation. At the same time I have had opportunities of practical acquaintance with the most approved methods of treating and manipulating grain at every point, so am in a position to judge of the effect of any change or reputed improvement. Three years ago I wrote a criticism, which was published in The Miller, on "Progress in Roller Milling," in which I endeavored to prove that we had made little or no progress from the start. Now I can say we have made improvement, but in one respect only—purification.

There is no doubt that purification is the secret to good milling, and well-worked purifiers the acme of perfect work, so that to regenerate a mill in this particular is money well spent—that is, on one condition, that the new machines are properly handled. Now this is the real point. It is all very well to buy new machines, but would it not be better to ascertain whether the existing ones are doing their best? I can not disguise the fact that the greater portion of Hungarian flour—than which there is no better, nor better milled, in the world—is purified almost exclusively on the gravity purifier, which we have utterly discarded. Here it was generally ill-used on account of imperfect dusting and sizing; there, in Hungary, it is used to the very best advantage, with correspondingly good results. Some of us have yet to learn that it is not the buying of machinery but the working which constitutes the improvement. I bought an old fiddle for half-a-guinea, but I can not play it; the half guinea was nothing to the labor of learning to play.

I know of some millers who have spent many hundreds of pounds in new machinery to meet the competition of others who have not spent as many shillings in the same way, but with no effect. It is just the case of me and my old fiddle—they lack the skill. Yes; I think that is the answer to many a burning question. Eternal incompleteness lies more in the human than in the mechanical department. This, too, is a full explanation of the successful competition of some out-of-date mills—they are well handled, or as a French gentleman once expressed it after viewing a certain English mill, "magnificently handled, but wretched wheat." Nobody is better aware of this than the travelling expert, and dare he break a secret he could point to many a mill built on the newest and best principle, which by careless management has been allowed to run down, and eventually to get entirely out of the running, necessitating the calling of professional assistance, which, under any circumstances, is sure to prove an expensive luxury.

As I said, I admit that improvement has taken place in purification alone. Greater attention is now paid to wheat cleaning generally and to washing in particular, and it is laughable to see that those who condemned the practice as dishonest a year or two ago now make a boast of their progress in that particular. Washing, stoning and conditioning have all been practised pretty fully in Liverpool and district for years past. Finality may not yet be an accomplished fact or even within measurable distance, but sufficient for our needs is our present knowledge, and, fitted up to date, I should advise millers to make the very best use of their appli-

ances, and be content rather to follow the unattainable and expensive "knowledge like a falling star."

I fully believe wheat cleaning will undergo extensions and modification, but not radically, at least for some considerable time; even then the improvement will not be great, no more than it has during the last decade. In the purifying department I look for great changes, but little improvement. I have small hopes of better work than our best and newest types of machines perform, but purification will take a new departure. Machines will assume a different form and occupy far less space. Indeed, I have always been struck with the unwieldiness of all our machines, and particularly the purifier. The difference between the mills of the next century—now very near—and our existing ones will be in concentration. Flour dressing will be done on a different principle in a much smaller machine, but for all that I believe our 1893 mills, well managed, will be able to hold their own well into the next century. The new mills will be less expensive constructions, and will probably absorb less power—a power the motive force of which we, as yet, have no conception, but it will not be steam; in that department, at least, we have not attained finality. Even then, when the millennium of milling appears in sight, "wheat" will be just as important a factor in flour manufacture as it is to-day.

Depend upon it, whatever developments may take place, and however near we may approach the alluring and illusive "unattainable," the best flour will be made in those mills, new or old, which use proper wheat and are properly managed. Did I say "the best flour?" Aye, and the best money, too. What is true to-day will apply with equal force twenty years hence; and for that reason I repeat that were greater attention paid to these two important particulars to-day, the mill builders would do a less flourishing business in reconstructions, and some millers would have less cause to complain of an unprofitable trade.

Independently of outside assistance it is really astonishing what a lot of changes of system and arrangement are constantly taking place in most mills. It seems almost inconceivable that a mill fitted up to date, with all the supposed latest improvements, should admit of any change at all, much less a constant succession of changes, all apparent improvements. Really there seems to be nothing like finality so far as changes of system go. In competent hands these changes will aggregate an improvement, but incompetence will make confusion worse confounded. It is even whispered that the mill builders drink to the health of the man who plans his own mill, as lawyers do the man who makes his own will. Trouble and a long bill is in each case a remedy for this peculiar ill. Some millers who ought to know say that when the mill builder has finished the miller must begin. Just so, if he is a practical man, but certainly not if his knowledge is only of the book order; for too often his ardor will outrun his discretion and his inexperience lead him into difficulties. Finality will then appear in perspective as a constantly vanishing point, "unattainable."

DAMPERS IN STACKS.

BE careful of dampers in stacks; use them with care; be sure they are open before starting the fires. The greatest care should be exercised when light fuel is used, for to close a damper with large body of fuel on grate bars will cause flame to impinge on bottom over same, thus concentrating heat on one point of boiler. Many good boilers have been bagged and burned from the same cause. Always try and regulate draft by damper in bottom or front.

OUR SENTIMENTS, TOO.

HERE is some advice tendered by Hunt's Merchants' Magazine: "According to the character or extent of your business, set aside a liberal percentage for advertising, and do not hesitate. Keep yourself unceasingly before the public; and it matters not what business of utility you may be engaged in, for, if intelligently and industriously pursued, a fortune will be the result."

COOPERAGE D'PT.

There is a close affinity between the work of the cooper and the business of milling. The miller is either his own cooper, having a cooperage as an adjunct to his mill, or else he rests for his supplies on an outside cooperage. The cooper in any case finds one of his best customers in the miller. The object of this department is to bring each in close touch with the other and to materially advance the interests of both trades.

THE MONTH'S TRADE.

SINCE our last report there has been good drying weather all over the cooperage manufacturing district, the consequence being that staves and hoops are now in first class shipping condition, and orders can be promptly supplied. There is no change in prices, for while there is enough stock to promptly fill orders, there is no surplus as yet on the market, and with the good prospects we have for a fruit crop, there is not likely to be any drop in prices. Heading is still very scarce and commanding good figures.

The flour trade is not very brisk at present, only the more progressive millers running full. A great many of the larger millers in the country are now putting in dry kilns for drying staves before making them into barrels. The latest one on the list is Mr. N. H. Stevens, of Chatham, who is putting in an Andrews dry kiln for drying the staves, so that he will have a first class barrel. With kiln-dried staves and the patent wired hoop, Mr. Stevens will have the best barrel that is made in Canada.

Sutherland, Innes & Co. are also putting up this fall large kilns for drying staves and heading, as it is found that the general tendency of the millers is to use kiln-dried staves, especially during the winter months, as it saves them the cost of coopering the barrels when they arrive at destination, and helps the flour to sell better.

There is every hope of a large apple crop this season, and coopers are already beginning to look around for stock, so that they will not be left in the cold when the busy season comes on.

DULL MINNEAPOLIS.

The cooperage situation at Minneapolis shows very little change during the month. Slow is still the word to describe the situation. The flour mills do not increase their output to any remarkable extent, and considerable of the flour produced is for export to foreign parts. For this reason more sacking is done than usual. Only about 40,000 barrels per week are being turned out, which leaves the shops not much more than half occupied. It is estimated that in the eight cooper shops in Minneapolis there is at least $300,000 worth of barrel stock, and the insurance on all this cuts no small figure in the present condition of the money market. May business has shown a falling off from the April trade by fully one-third, and usually the month of May is the best one in the year. There is of course no stock whatever purchased, as everything has been contracted for the season, in fact the coopers would rather sell themselves than to buy. There are no changes noted in prices. Heading is quoted at 4½ cents, and could no doubt be bought for even lower figures in the present disposition of the trade. Elm staves are now bringing $6.75 per thousand. A good deal of the stock that comes in now is being side tracked, and frequently it stays there some time before being taken care of.

COOPERS' CHIPS.

J. B. Coates, of Blenheim, Ont., has suffered a loss of about $2,500 by the burning of his store and hoop mill.

The heading mills of northern Wisconsin being in almost a perpetual snowbank up to the 1st of May, are behind on orders.

A patent on a barrel-making machine has been issued to W. T. Vale, of Toronto, and he assigns it to the New York Barrel Machine Co. A stock company is being organized for Canada.

The French oak stave factory, at Monroe, La, is nearing completion quite rapidly and will soon be in operation, and will work from 75 to 100 men daily. They are receiving from 15,000 to 20,000 staves daily, which will be made complete here for shipment to Bordeaux, France.

The Lumberman, of Chicago, says of trade in that city: "The demand for lard tierces is slow, and prices range from 87½ to 90 cents. There is no demand for pork barrels. There is little call for staves and few arriving. In the south, shippers are disposed to wait until they can get $18 a thousand for staves, and until tierces sell higher than now, coopers cannot afford to pay more than $17 for strictly No. 1 staves. Like conditions pertain to pork staves. The market as a whole is dull.

Wm. Merrill, of East Saginaw, Mich., has patented a machine for finishing staves, the combination of the jaws for clamping and retaining the stave in a fixed position, the rotary cutters located on one side of the said jaws for crozing and chamfering the ends of the stave, the knives located on the opposite side of the said jaws for jointing the edges of the stave, and mechanism for moving the said cutters and knives to and from the said jaws for finishing the staves without moving the blank.

A New York flour man, in Minneapolis lately, stated that, while the mugwump barrel used by the Pillsbury mills was a homely package, it was stronger and would stand more hard service than the ordinary barrel. Flour could be tierced up in warehouse with it a good deal higher than round-hoop barrels would stand. The breakage of bilge hoops on stored barrels, which was large when round hoops were used, amounted to little or nothing on the mugwump. Another point in favor of this package cited by barrel-stock men, is that its use equalizes the demand for patent and round hoops, and keeps the market more uniform and steady than would be the case were only one kind in use.

GRAIN INSPECTION.

HON. J. F. WOOD, Controller of Inland Revenue, replying to the memorial on the subject of grain inspection sent by three members of the Board of Examiners, Montreal, Que., writes as follows:

To Mr. H. McLennan, Chairman of the Board of Examiners for Grain, Montreal:

Sir,—Your communication of the 10th inst. has had the careful consideration of the Department. The Inspection Act, when originally introduced, was to afford machinery for the use of commercial bodies. The Government has been very careful not to override or weaken the authority of either inspectors or examiners appointed under its provisions, and although Parliament has chosen to give the Governor in Council power to counteract the effect of hasty action, especially in view of abnormal seasons, I am of opinion that those powers should be used very sparingly. In the present case it would appear that the samples selected by the board appointed for that purpose have been generally approved by the trade, except that No. 2 oats are now alleged to contain more barley than the statutory definition of such grade would seem to justify. Not a single complaint has reached the department in respect of the inspection of grain of any kind by the Montreal inspectors, whether inspected within or without his district, and but one in respect of any other inspector. While, therefore, the department is inclined to think the standard sample may be faulty, still buyers must know what to expect, as they have the sample to compare with the statutory grading, and in view of the standard having been in use for several months. I am of opinion that the power to reject the standard vested in the department should not be used, as probably more harm might be inflicted by so doing than by continuing the existing standard in use, even if it be below the grade indicated by the statutory definition of No. 2 oats. The standard having been established and distributed, the mixing of other grains to bring a given sample higher than the standard to an equality with it does not seem to be a matter upon which the department should interfere, though it seems to be within the scope of Boards of Trade to agree upon and promulgate rules as to all such matters, provided in doing so they do not override the provisions of the law. The Inspection Act must be regarded, as I have said before, simply as a piece of legislative machinery. The whole spirit of it is to vest in Boards of Trade the motive power for bringing it into effective action, and for this reason I deem it to be unwise (the principle of inspecting to sample as well as inspecting to standard having been admitted) to prohibit, even if the department has the power to do so, the practice which seems to have prevailed in some quarters of inspecting foreign grain "in transit" to foreign ports, or if inspecting to Canadian standards, in foreign ports, provided the certificate states clearly what are the facts in relation to the grain so inspected, Should you see fit to arrange a meeting of representatives from other boards with the board of Montreal, to discuss the whole subject of grain inspection, and should such a meeting deem it wise to propose any amendment to the Act during next session, I shall be happy to give the whole matter my careful consideration. I am, sir, your obedient servant,

JOHN F. WOOD,
Controller of Inland Revenue.

Has your subscription to CANADIAN MILLER expired?

MY work brought me into company a few days ago with a number of representative millers from various parts of the province. They were men who know milling conditions in Canada as thoroughly as any dozen millers you would meet anywhere, and their knowledge of the successes and failures of milling in other lands is considerable. There was present that veteran of the trade, Mr Jas. Goldie, of Guelph, whose reminiscences of milling in this province would constitute an interesting volume at any time. Discussing the question of creating new markets for mill products, he made the cogent remark, as reflecting the condition of the milling trades for some months past, "One cannot do business with anyone now." My miller friends of whom I write are no pessimists; on the contrary they might each be taken as typical of the traditional jolly miller; at the same time they realized, and manfully acknowledged the fact, that the past year has been a slow one for milling. The talented president of the Dominion Millers' Association, Mr. M. McLaughlin, whom all millers are pleased to honor, facetiously remarked, when an intimation was made by one of the company that a certain miller had sold out, "One fortunate." Mr. McLaughlin would hardly want to have it said that a man was better out of milling than in it, because I think he has every confidence in the ultimate future of this industry; his big mill, recently enlarged, is the proof, but it was one way of expressing the general sentiments of millers that the immediate present of the trade is rather depressed. Of course the recent escapade of Leon M. Carrier, of Quebec, who managed to do up somebody—whether railroads or millers may not yet be certain, or both—to the tune of $30,000 or $40,000, was a topic for comment. The talk had previously been on the line of adopting some plan of protecting the trade against such men as Carrier. "Are you aware," said secretary Watts, of the Millers' Association, a man who has an eagle's eye when the welfare of the Canadian miller is in jeopardy, "that this man Carrier was twice sold out by the banks within the past few months?" "I am so informed," said Mr. Watts, "and if we had in connection with the Dominion Millers' Association, some such method as is the vogue with the Michigan millers, we could readily put our millers on to these fellows who from time to time work to fleece some innocent dealer." Who else constituted this company of millers? There was Mr. H. A. Mulhern, of Peterborough, one of the best known millers in the province, and who has recently shown his capacity for greater things by a noticeable enlargement of his milling properties in that growing eastern town. A man who never says much, but whose judgment always carries weight with his associates, Mr. J. D. Saunby, the miller of the Thames, London—he was one of the number. The Sniders, of Waterloo, a family with an historic record in the annals of Canadian milling, found a worthy representative in Mr. W. S. Snider, of Waterloo town. It is not the face of Mr. A. H. Baird, of Paris, that shines out in an illustration elsewhere on this page, but the family likeness is there. The Paris miller was with us, and like the brother who so ably presided over the affairs of the Toronto Board of Trade a year ago, Mr. A. H. Baird has a keen head for business, and his suggestions are at all times marked by shrewdness and good sense. Of course the ready-witted Spink was there. A suggestion was made that several of the company try their hand at formulating a resolution touching a matter that was being discussed. All made a good fist of the job, but so thoroughly did Mr. J. L. Spink's setting of the situation express the sentiments of everyone else that by unanimous consent the other motions were consigned to the waste basket. That is the Pickering miller every time. He gets there. Lindsay was represented by Mr. J. D. Flavelle, who has a level head for business and a practical knowledge of milling, that gives influence to any remarks he makes on the subject of flour production or flour markets. Last, but by no means least of the company, was Mr. Wm. Galbraith, treasurer of the Dominion Millers' Association. His experience in handling flour covers many years. How the markets have been depressed in other years, as well as the present, and the trade lived through it all; the rocks on which dealers have sometimes split, and the difficulties that have had to be encountered; the fashions of the trade in the past and the whims of the present, are a few of the many matters of which Mr. Galbraith can descant out of his years of experience as a large flour handler. And so our company of jolly millers talked and talked and successfully planned and worked for the weal of the milling trades of Canada.

* * * *

Robert Watson, minister of Public Works in the Manitoba government, when in Montreal the early part of June, said to an interviewer: "The outlook for the new harvest is splendid. The lateness of the season is no drawback. Vegetation seldom begins till the middle of May, and now it is progressing finely. The great question of the spring is that of rain, and now there is ample moisture, with quite sufficient heat."

* * * *

HUGH N. BAIRD.

He does business in the Board of Trade buildings, where he and his partner have handsome offices, and the volume of his affairs requires a large staff of clerks, for he operates in Toronto and Montreal, and sends his product over the seas to feed the people of England. He is popular among his fellow business men, and perhaps no president of the Board of Trade ever filled the position so well as did he when he held the office. But more than being a successful man of commerce, he is a stalwart Canadian who loves his land with rare devotion, and is loyal to the Mother Land.

* * * *

Three-quarters of a million dollars have been expended on the Galops rapids with the expectation that the grain trade would have been a large gainer in opening up an improved St. Lawrence river channel. But the fates would appear to be against it. David Thompson, manager of the Montreal Transportation Co., says that their pilots refuse to take a tow down the new channel, as they consider it unsafe, on account of the cross currents. "The government," has not yet shown to us, Mr. Thompson has further remarked, "that the channel is practicable for a tow of barges. Let it do that first, and let the pilots see that it is safe." M. W. Stewart, manager of the Montreal Forwarding Co., says: "Our pilots can not see their way to run down a new, untried, and as they believe, a dangerous channel, The cross current is too strong and the rear barges of a tow would be driven on the bank of the channel." C. A. Jacques, of George E. Jacques & Co., says that their propellers run the new channel but he would not hazard an opinion as regards a tow of barges."

* * * *

Mr. Geo. F. Hastings, manager of the Keewatin flour mills, speaking of the crop prospects in Manitoba and the Northwest, said it was too early to judge yet, but with a dry summer, the farmers would fare very well. The season was a little colder and more backward than usual. Mr. Hastings thought there was rather a greater acreage of wheat sown this year than last, while it was also noticeable that the wheat area was extending further westward. Especially was that the case in the Saskatchewan district, brought about through railways being constructed in there. Mr. Hastings had been through to the Pacific coast, and went to the Lower Kootenay to see what business could be done there, but found that Canadian millers were practically shut out through the heavy freights. It would cost Manitoba millers $1 a hundred pounds to send flour to Nelson, while Spokane flour could be delivered there duty and freight paid, for 81 cents, giving the Americans an advantage of 19 cents per cwt. The Spokane flour was not so good, but with this advantage the Canadian article was shut out. The British Columbia trade remained steady, and they had no trouble with the collections. They had made small shipments to China, but the results had not been so satisfactory as could be wished. The market seemed to be filled with Oregon and California flour, and the demand for hard wheat flour, such as Manitoba turns out, was not large.

* * * *

The discussion as to the origin of Fife wheat may, perhaps, be rounded up with the following letter from J. A. Fife, M.D., of Peterborough, whose name was mentioned by a number of our correspondents, as one who could give a correct history of this debatable question. It will be noticed that the particulars given by Dr. Fife, agree in leading particulars with the letter from Wm. McDonald, of Sandfield, published on this page of last month's MILLER. Dr. Fife says: "David Fife, of the township of Otonabee, in the county of Peterborough, Ont., was a Scotchman, born in the township of Kincardine, on the Frith of Forth, and came to the township of Otonabee with his parents and brothers in 1820. About 1845 or 1846 he was in correspondence with a friend in Glasgow, Scotland, who was interested in unloading ships that brought in wheat from different parts of the world to that port. This friend sent some wheat to David Fife, of Otonabee, that was taken from a ship that came from the city of Dansic, in Russia on the Black sea. The grain was sown by Mr. Fife, and the produce from this was also sown and rapidly came into favor. It was not subject to rust, and was more productive than other varieties of wheat then grown. Mr. Fife tried to give it the name Dansic wheat, and sometimes Russian wheat, but these names did not become general. The neighbors, and others at a distance, gave it the name Fife wheat. I remember an article written about that time in an agricultural paper by the late George Easson, who was a neighbor of Mr. Fife's, in which he claimed the name Fife wheat should be the name by which that variety should be designated, as a rightful honor to the man who introduced the seed and made its superiority known. This variety of wheat rapidly came into favor throughout Ontario, and soon spread into the western states. If any one should ask for proof that the wheat now growing in Manitoba is obtained from that grain introduced and propogated by Mr. Fife, it might not be forthcoming, as I am not aware that any one keeps a record like a herd book or any other register, but I have no doubt but it is. I may say that this family of Fifes stick to the clan and shire name, and spell their name Fife and not Fyfe, as some people in Manitoba do."

THE Canadian MILLER AND GRAIN TRADE REVIEW

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

IS THERE UNDERBILLING OF CARS?

Is it the case that someone, shippers or railroads, make a not unfrequent practice of sending forward carloads of merchandise underbilled often to a considerable amount? It is so charged by those engaged in the flour and grain trades, and there are those interested in other departments of manufacture who are telling equally strange stories. Where there is so much smoke, believers in the old adage will say, there must be some fire.

So far as the milling trades are concerned the matter has been made prominent at the present time by the sudden departure of Mr. Leon M. Carrier, commission merchant, of Quebec. He was in the habit of having large quantities of Ontario flour shipped to his address in Quebec. It is now broadly stated that shipments were in several cases underbilled to the extent of 100 barrels below the actual weight contained in the cars. For example, the statement is made that in the case of one car billed at 300 bags, it actually contained 500. Other cars were billed as containing 150 barrels each when they really contained 200. Another scheme to attain a similar end and one that it is said is practiced by dealers is to put the flour up in 140 lb. bags and bill them as 98 lbs. Or again a few tons of feed will get smuggled into a car and be omitted from the shipping bill saving in freight charges to that extent.

How unfairly methods of this kind work against the honest dealer will be clear to the veriest novice in commerce. Their ill effects have been very patent in the flour trade in Quebec where prices have been cut lately so that the miller with the most perfect advantages for doing trade has been unable to meet the competition that has been prevalent. "Why, do you know," said a prominent miller to the writer, referring to a specific shipment of flour, which it is alleged was underbilled, "that exactly forty-nine dollars was saved in freight charges between what was paid and what should have been paid if an honest shipping bill had been made out —a nice profit in these days when millers hardly know, where under the most favorable circumstances, their profit is to come in."

The practice is rascally and vicious whoever is to blame and places the honest dealer in any line, and the charge is that milling is not the only trade suffering from these methods, in a cruel position in competition with the dishonest dealer.

Are the railways ignorant of these practices? Well, we should like to believe that there is nothing in any of the charges made; that all millers are honest; that there is no commission dealer who tries to get ahead of his rival by the methods here described. But it is hinted that the railroads know as well as anyone how to follow Lord Nelson's plan of sometimes looking through a glass eye at certain acts. Railroads are keen for business, like other concerns, and whilst they cannot perhaps cut rates, they have learned by this time that there are more ways than one of killing a cat.

As to a remedy for the trouble, if trouble there really is, it will doubtless be found, and in the railroad act, extracts of which we give below, very important machinery exists to get at those who are known to be guilty of the practices named, whether these be shippers or railroads. Certain clauses of the act read:

"That the railroad committee consisting of the Minister of Railways and Canals, the Minister of Justice, and two or more other members of the Queen's Privy Council; three of whom shall form a quorum; shall have the powers and perform the duties assigned to it by this Act." Among these are: "The Railway Committee shall have power to enquire into and determine any application, complaint or dispute." (Sect. 11.)

"Tolls and rates for the transportation of passengers and freight." (Sect. 11, k.)

"Unjust preferences, discrimination or extortion." (Sect. 11, p.)

The Railway Committee, etc., shall have the same power to enforce the attendance of witnesses and to compel them to give evidence and produce the books, papers or things which they are required to produce, as invested in any court in civil cases." (Sect. 15.)

"No tolls shall be levied or taken until the by-law fixing such tolls has been approved of by the Governor in Council, not until after two weekly publications in the Canada Gazette of such by-law, and of the Order in Council approving thereof; nor shall any company levy or collect any money for services as a common carrier except subject to the provisions of this Act." (Sect. 228).

"Every by-law fixing and regulating tolls shall be submitted to revision by the Governor in Council, from time to time, after approval thereof; and after an Order in Council altering the tolls fixed and regulated by any by-law, has been twice published in the Canada Gazette, the tolls mentioned in such Order in Council shall be substituted for those mentioned in the by-law, so long as the Order in Council remains unrevoked." (Sect. 228.)

"No company in fixing a toll rate, shall, under like conditions and circumstances, make an unjust or partial discrimination between different localities; but no discrimination between localities, which, by reason by competition by water or railway it is necessary to make to secure traffic, shall be deemed unjust or partial." (Sect. 232).

"No company shall make or give any secret special toll, rate, rebate, drawback or concession to any person, and every company shall, on the demand of any person, make known to him any special rate, rebate, drawback or concession given to any one." (Sect. 223.)

"All regular trains shall be started and run as near as practicable at regular hours, fixed by public notice, and shall furnish sufficient accommodation for the transportation of all such passenger and goods as are within reasonable time previous thereto offered for transportation at the place of starting and at the junction of other railways and at usual stopping places established for receiving and discharging way passengers and goods from the trains." (Sect. 246.)

2nd. "Such passengers and goods shall be taken, transported to and from, and discharged at such places, on the due payment of the toll freight or fare lawfully payable therefor:"

3rd. "Every person aggrieved by any neglect, or refusal in the premises, shall have an action therefor against the company; from which action the company shall not be relieved by any notice, condition or declaration. If the damages arise from any negligence or omission of the company or its servants."

THE FINANCIAL SITUATION.

THE observations of the chief officers of the Bank of Montreal, given expression to at the annual meeting of the leading monetary institution of the Dominion in June of each year, are usually scanned with considerable care by the business men of the country. With commercial connections touching every corner of the Dominion and almost all kinds of traders, the officers of this bank are in possession of data of a volume and character that enables them to judge more accurately than most men can of the true position of financial affairs. In the case of the Bank of Montreal, perhaps more than any other Dominion institution, a large business is done both in the United States and Great Britain, so that opportunity is given its officers to take a broad view of the whole financial situation.

We are aware that it has become the vogue with some bank magnates, some more diminutive than others, to use the occasion of the annual meeting to lecture business men on business ethics, in the daily application of which they are not all times themselves too particular, and to make a parade of learning in business economics that the depth of their experience hardly justifies them in making. But these are little foibles of the profession common to any business and profession that do not after all affect the general situation.

Sir Donald A. Smith, president of the Bank of Montreal, made the more lengthy and important speech at this year's meeting in the early days of June. The profits of the year were deemed satisfactory, and this was the first matter of comment and congratulation. The business of the year was, especially in Ontario and Quebec, pronounced satisfactory. The boot and shoe trade, that in Quebec is an important industry, was in a most unsatisfactory condition at one time, but an undoubted improvement had taken place lately. Dry goods, which had been slow, were improving. Lumber for the past year had shown a marked improvement, and it was expected that these conditions would continue.

The most disappointing branch of trade was wheat. The quantity was not equal to the expectations of the early part of the season, and prices were so low as to prove very disappointing to the farmer. Hay had become an important factor to the farmer, and so had cheese and cattle, distributing something like $20,000,000 among them last year, and it is suggested that more attention might with profit be given to these branches of farming in the future.

The section of country that is described as suffering the severest depression during the year was Manitoba and the Northwest. There they had a great shrinkage in the quantity of grain owing to the exceptionally dry weather just a short time before the ripening of the crops, so that the volume for export was much smaller than was expected, and when to this is added that the price they received for their grain was from twenty to twenty-five per cent., or even more, less than in the preceding year, we at once see that it put the people there at a very great disadvantage. It is expected, however, that the crop this year will be very satisfactory. Though the season was late in opening, Mr. R. B. Angus, one of the directors of the bank, who has recently returned from the Northwest, reports crops more forward than they have been for some years back.

General manager E. S. Clouston, followed the president, and having referred to the financial troubles in Australia and the silver difficulties in the United States, he summed up the financial situation in Canada thus:

In the midst of all this unrest and financial excitement it was a source of relief and assurance to those having charge of financial matters in Canada to feel that the commercial business of Canada was in a sound condition and that trade, on the whole, had been fairly satisfactory during the past year. Profits have been reduced by competition in some cases, but on the other hand there have been fewer bad debts, the record of failures showing about $12,000,000 against $16,000,000 for the previous year. The grain trade has not been quite satisfactory, owing to low prices, but there has been a decided improvement in lumber, and the prospects ahead are good. There is no great speculative inflation. What inflation there was in the stock market has already largely corrected itself, and if the banks will only act with caution and circumspection, neither encouraging speculative ventures nor refusing judicious assistance, there is no reason why the coming year should not be a satisfactory one for Canada. It must be a year of caution, however, as the condition of affairs in the United States is not reassuring, and we may be more or less affected by it owing to our commercial relations with that country. It should also be a period of economy, and that applies to governments, cities, and municipalities as well as the commercial community; for we have been spending too much money; too many subsidies to railways, too many expensive works and too much good money wasted. Those having charge of the purse strings will do well to draw them tightly during the coming year.

TARIFF MATTERS.

THE New York Commercial Bulletin discusses with greater candor and fairness than is common to many newspapers either in Canada or the United States the question of trade relations between the two countries, and presents some figures that will serve a useful purpose in the consideration of this question. It says: "It was deemed necessary for the farmer to exclude Canadian barley and eggs three years ago in singular oblivion to the immense quantities of corn, wheat and provisions which Canada annually buys from us. In the fiscal year 1892, the breadstuffs sold in Canada amounted to $11,401,494, while the amount we bought of her was only $3,673,843. The only two large items in our breadstuff imports from Canada were wheat and barley, both of special varieties, grown little or not at all here, and imported because of their quality, and not because of their cheapness. The wheat and flour we sold Canada were worth nearly seven million dollars, the corn nearly two millions, and the rye over two millions. All the provisions we bought of Canada amounted to less than $57,000, and the butter and cheese we bought were less than $27,000, while the quantity we sold was worth $1,237,910. The aggregate of all these food articles exported by us to Canada in 1892 was $16,855,054, while the amount imported from Canada was only $5,079,615. And yet the farmers along our northern frontier have been told till many of them believe it that Canadian competition would ruin them."

VIEWS AND INTERVIEWS.

Success on Top.

The reply of Daniel Webster to the young man who sought his advice as to taking up law has often been quoted. "Yes," said the learned jurist, "there's lots of room on top." How to get there is the bother with many men in various callings. "On every side," some one has said, "we see the plodding masses following in the old rut, each contending with his neighbor for the scanty herbage within reach of the well-beaten pathway, while just beyond, on either side, are pastures fresh and green. Originality is the ladder which affords an escape from this old rut, which is being worn deeper every day by a constantly increasing stream of plodding, grovelling, mediocre humanity. These plodders are found in all kinds of business. They are struggling simply for bread, and many there be who fail to win it. The man who would make a success of a business venture must leave the rank and file, and get off the tread-mill. He must climb out of the rut. He must be an originator of practical ideas, and an independent thinker. He must be able to clearly see a point, and then possess the executive ability to make it. He must possess sense enough to know that he cannot advance without breaking ranks."

Suits The British Baker.

It is not supposed that in much of the flour exported from the United States to Great Britain during the past six months that there has been any large profit for the American miller. Nor has this constant glutting of the British markets helped, in many respects, Brother Jonathan's trade. Milling, of Liverpool, however, points out that in one respect at least, the American is serving the Britisher and in a way which he scarcely realizes and hardly intends. "Fine spring patents at 23s. 6d. and Fine Kansas patents as low as 22s. 6d," remarks Milling. "This flour has the advantage of age and dryness; desirable qualities for admixture with Black Sea wheat-flour, the gluten of which latter, while abundant, is more sticky and troublesome to the baker. By using a large proportion of spring American wheat all goes well in the oven; but a smaller proportion of spring-wheat flour, imported as flour, with age serves the same purpose and then the Britisher can use a larger proportion of the cheaper Black Sea wheats and sell his own fresh without complaint from the ever-critical baker."

Bread From Underground Grain.

It is idle in this day of new inventions and novelty in every department of life to suppose that there is no other way than our way to do a thing. We have our own way of making bread in this country, but it is different unto the method of a Riga manufacturer. The Rigaer Zeitung reports regarding it: "An eight horse-power steam motor sets in motion the machinery for converting the grain into bread. In the first place the wheat or rye is soaked in warm water. The grains swell and become soft, and at the same time all dirt is separated from them. In this condition they are crushed into a thick liquid mass between a pair of rollers. A thorough mixing of the bran with the gluten and starch of the grain is obtained by forcing the thick liquid through closely perforated plates to which it is conveyed by means of archimedian screws. After passing through these seive-like plates the mixture has a stringy appearance like vermicelli, and as the holes of the plates become successively smaller a perfect mixture of the various constituent parts of the grain is effected. The mixture is next sent to a kneading machine, where it is thoroughly mixed with leaven and other necessary additions. When the dough is thus prepared it is left in large wooden tubs to rise, which takes about four or five hours. It is then put into a machine resembling a brick-press, and which works in the same manner. The dough comes out of this machine shaped into loaves, which are left to stand another hour or two, and are then put into travelling ovens made after General Wasmundt's system, from which after sufficient time the bread is removed ready for use. It is claimed as an advantage of this new bread that it is better looking, better flavored and more nourishing than that prepared in the usual way."

Don't Worry.

"A man's business life is too short," says a contemporary, "to waste any portion of his time in fretting over any trifling matters of business. If a man has a mind to be annoyed by every little mishap that occurs in his establishment he can keep himself in constant hot water by worrying. There is neither sense nor reason in flying into a fit of passion because some careless clerk breaks a stone fixture, leaves a faucet running, smashes a jug, or commits some other trifling blunder. Constant fretting on the part of employers makes clerks and book-keepers nervous, and in this condition of mind and body they are far more apt to make mistakes than they otherwise would be. Business worry wears a man out very rapidly, and when the habit of fussing is acquired, it is extremely difficult to rid oneself of it. There are men who work themselves into perfect fits of passion over little insignificant matters not worthy of serious thought and consideration. There are other men who fret because they fear that something unpleasant is going to happen to their business. They may have obligations to meet, a note due at the bank, while their customers cannot be depended upon to help them out of a tight corner, but there is no earthly use of borrowing trouble until trouble comes, and then every enterprising merchant should manfully meet it. There is a great difference in merchants. Some wear themselves out before middle life, become irritable, morose, snappish and disagreeable in the conduct of a very small business, while other men, with vast interests and great responsibilities who are calm and well poised, patient and nervy, live to a good old age without borrowing trouble or shattering their nerves over trifles."

Keeping in The Front.

There is a penny wise and pound foolish policy in business, sometimes. We may strain at the little economies in business to the sacrifice of the larger and more important ones. In an age when the survival of the fittest seems an almost unrevocable law of commerce, business men have to watch with keenest eye that in no particular they are outstripped in the race by a still keener rival. In milling one essential to keeping in the front of the race is proper equipment in the mill. The Roller Miller has this to say on the subject: "A miller frequently tries to make himself believe that he must keep a certain machine, even though it is far out of date, simply because it cost him a considerable sum when it was built. There was a time, of course, when the majority of machines were built by hand in the mill. It was, as a rule, stocked with as much material as possible, both wood and iron, which necessarily made it an expensive affair. For instance, there are even to-day many millers holding to their old-style bolting chests, which are regular traps for bugs and worms. The mill is cluttered up generally, owing to the immense proportions of the old chest. Conveyors that carry out the material are twice or three times the length they would be in modern chests, and consequently they wear out the stock all the more. Oftentimes these long conveyors warp and become crooked to such an extent that the flights fairly gnaw half way through the sides or bottom of the conveyor box. One of these conveyors filled with flour or other material throughout its entire length will have its effect on the amount of power consumed, to say nothing about a full chest with these long conveyors. The long reels as well are loaded their entire length, and are quite heavy to move even when they are empty. A conveyor is certainly a very objectionable device to be used in a mill, these days, for anything excepting wheat or the finished products. Likewise do millers cling to ancient purifiers. There was a time when sieve machines were made of very large proportions. The shaker was probably patched up numberless times until it was rickety in the extreme. We now have the air-belt and the sieve air-belt machines, either of which will displace the old mammoth purifying machine to good advantage."

DOMINION MILLERS' ASSOCIATION.

A MEETING of the executive of the Dominion Millers' Association, at which a large amount of important business was transacted, was held in the Board of Trade Building, on Tuesday 7th inst. All members were present, except Mr. Isaac Warcup, of Oakville, who had tendered his resignation to the secretary, having retired from the milling business, and Mr. E. S. Edmonson, Oshawa, second vice-president.

Those present were: M. McLaughlin, president; A. H. Baird, first vice-president; C. B. Watts, secretary; W. Galbraith, treasurer; J. L. Spink, Toronto; J. D. Saunby, London; H. A. Mulhern, Peterboro; J. D. Flavelle, Lindsay; Jas. Goldie, Guelph, and W. S. Snider, Waterloo.

The meeting was opened promptly at 11 a. m. by the president. The secretary reported a total paid-up membership of 210, which included the following new members since the annual meeting in August last: Alonzo Bairge, Formosa; W. F. Stewart, Durham; T. Dexter & Son, Seatonville; Cookshire Milling Company, Cookshire, Que.; Heslop Bros., Port Robinson; R. T. Walsh, Ormstown; Flesherton Milling Company, Flesherton; James Wilson, Fergus; M. M. Squire, New Lowell; H. Hollingshead, Dutton; Knight & Hill, St. Mary's; George Needler, Millbrook; D. C. Thompson, Orillia, and Frank Harris, Springfield. The treasury was found in a healthy condition, all expenses of incorporation having been paid, and a considerable balance still on hand.

In the report of the secretary it was remarked, that there had been less cause for complaint than formerly in the inspection of Manitoba wheat. Perfection had not yet been reached but there was a marked improvement. A good opening for Canadian flour was to be found in the West Indies and if the various suggestions that had been made touching the local peculiarities of that trade were given a practical application, the market to a large extent could be secured to our millers. If Newfoundland was embraced in the confederation of the Dominion a flour trade larger than at present could be secured with that colony. As it was the trade was worth watching and cultivating, some 300,000 barrels of flour being consumed in the colony in a year. It was pointed out that bran and offal were to be disposed of at a profitable figure for feeding purposes and manure, a fact, apparently, that was not known generally to millers. Complaint had been made to the executive that low grade flours were being shipped from the States into the Maritime provinces, and passing the customs as feed, thus escaping the duty that is practically prohibitory. The department of the Interior had been communicated with, and the executive were assured that prompt measures would be taken to stop the fraud, which it was believed was done.

The secretary, acting under instructions from the executive, had effected a satisfactory arrangement with Lloyd's Marine Insurance, a plan that very completely covered the difficulties that had hitherto been experienced in the shipping of flour by water.

The report of the Central Wheat Buyer showed that the business of the office had suffered to some extent lately in sympathy with the depression that had existed in the grain and flour trades during the past six months.

On resolution the date of the annual meeting of the Association was fixed for Wednesday and Thursday, August 9th and 10th. Being the first meeting since the final consummation of the incorporation of the association under special act of parliament additional interest, it is expected, will be attached to the proceedings. The programme of the day will include the discussion of various topics of great practical value to millers. Among these may be named:

The practice of underbilling cars and the remedy.

A systematic effort to warn members of the Association of the tricky dealer.

A standard form of blank orders for buyers and sellers, and means of redress against dealers who refuse to accept shipment of flours at dates ordered.

It is expected that several papers on practical milling subjects will be read by prominent members of the Association and a discussion follow these.

On the second day of the convention a trip will be made from Toronto to Niagara Falls and return, the cost of which will be quite nominal to members of the Association. This is an outcome of the suggestion made by President McLaughlin a year ago, that whilst these annual gatherings of millers should be for business that they should also be used as a means of enabling the members to become better acquainted with one another and perhaps in no better way can this be done in the summer season than through the means of such a trip as is now being planned.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

OATMEAL MILLING IN MANITOBA.

NOT long since the charge was made by the trade in Manitoba that Ontario millers were branding as Manitoba flour a product that was not manufactured from Manitoba wheat. The deception, so far as it may have been practised at the time, has not, we believe, any existence now. It would seem, however, that Manitoba oatmeal dealers have taken a cue from Ontario, for according to the Pilot Mound Sentinel, "it has been the practice of dealers in Winnipeg to brand the meal manufactured in Manitoba with an eastern mark, and afterwards distribute it throughout the province described as Ontario meal." Manitoba oatmeal is not equal in quality to that milled in Ontario, and hence the fraud, and the supposed advantage to the fraudulent dealer. Now that the little trick has been discovered, and been exposed by the local press, it will be expected that those naughty dealers will no longer continue naughty.

Though oatmeal milling in Manitoba has not developed to any large extent as yet, there being only some three or four mills in the province, and the most important of these, that situated at Pilot Mound, was recently burned, yet the people of the prairie province believe that the conditions of the country are favorable to the extension of this branch of trade. The quality of oats grown in the country are, it is claimed, better than those raised in other provinces, and can, with a little more attention to the cultivation, and the farmers provided with dry granaries, be further improved. With these conditions watched and an improvement made in the methods of milling, Manitoba, it is expected, will take a front place in oatmeal milling.

WHERE THE FLOUR GOES.

The output of United States flour mills runs into large figures. Where all the flour goes is an interesting question. The Minneapolis Market Record discusses the matter in these terms: "The larger portion of the wheat crop of the United States is winter wheat. The three principal spring wheat states are Minnesota and North and South Dakota. Last year they raised, according to government estimates, 107,975,000 bushels, but these estimates were much too low, probably 140,000,000 bushels is nearer correct. The bulk of this wheat is sold at Minneapolis, mainly to local millers. The demand from them is sharp, most of the time keeping prices above an export basis. They are so now and have been for a long time. In other words, a farmer can sell his wheat to the millers in Minneapolis for more money than he can get for it either at London or Liverpool, freight off. The reason is perhaps that the flour made here is of a better quality than that made by English millers, even when identically the same wheat is used, and commands higher prices. This is due to the machinery used here being superior to much that is in use there. For this reason English millers are forced to buy cheaper wheats from India, Argentine and Russia, to mix with our spring wheat, in order to meet the competition of the spring wheat millers. The trade in the leading English wheat markets is called dull by millers here, and prices there are very low, but the demand is picking up, and spring wheat flour continues to be pushed on to them, and seems to stand at the head of patent flours, with the exception of that made in Hungary. The latter production is small. Most of our spring wheat flour is sold in the United Kingdom."

FLOUR ON CREDIT.

No good purpose is to be served by a wholesale denunciation of the credit system. Credit is doubtless bad—under certain conditions. Credit is also good, and under some conditions an absolute necessity of business. It is only giving utterance to a very self-evident fact to say that to no small extent the basic principle of all business is credit. But when we commence to particularize there are certain trades where credit should be given much more sparingly than in others. This is the case in milling. The flour comes from wheat and no one pretends to buy wheat except on a cash basis. The labor which is put on the wheat to convert it into flour calls for immediate cash. These days flour is sold on so close a margin that there is no room for taking chances with bad accounts. And yet all millers do not adhere strictly to the cash basis. One of the drawbacks of doing a trade in flour in the province of Quebec is that to a large extent credit is given by the flour handler. The argument there, and the argument in Ontario, where the custom is not so prevalent, but still is not extinct, is that "others do it, and we must do the same unless we are prepared to forego trade." The serious question to consider is whether there is not more money in foregoing some trade that carrying the risks, and the losses, too, that are inevitable to the credit system, no matter how carefully watched.

Conversing with Ontario millers we have been pleased to learn that many of the best of them adhere very firmly to the cash basis, at the same time there are those who are prone to be lax in this particular. At a time when caution is the admonition in commercial circles the usually prudent miller will not despise a personal application of the admonition.

BRITISH FLOUR MARKETS.

[Special correspondence CANADIAN MILLER.]

IN my last letter I gave some information touching the kind of flour to make to meet requirements here. In this letter I shall give the best places for such grades as were mentioned in my last, and the reasons why other places will not give the Ontario winter wheat miller even cost of manufacturing. But let it be understood that when Manitoba produces more good No. 2 spring wheat than the Dominion can consume, bringing down price of No. 2 hard spring to export basis, then those very places where at present winter patents cannot be sold at a profit, will take a portion of Manitoba patent, because it will not come into direct contact with the English production. Also, let it be understood that while I say that at some points winter patents cannot be introduced without loss, yet at the same time some Ontario millers are selling a small portion of their winter patents even in those places, but it is because those brands were introduced there before the English patent gave such competition, and now sells because of the reputation of the brand, and not because of its intrinsic value over other new brands that cannot be successfully introduced now.

First then, I will mention the places where winter patents cannot be successfully introduced now and the reasons why, viz.: Newcastle, Hull, London, Bristol; and the reasons are that large quantities of English made winter patents find a market in those places made from English winter wheat or part English winter wheat bought at prices at the mill door that foreign winter wheat flour cannot compete with and so far as London is concerned Australia, California and River La Plata send immense quantities of winter wheat flour there, which has a superior reputation for biscuit and confectionary purposes, hence from reasons mentioned I fear our Ontario patents cannot be successfully introduced in those markets. However, those reasons do not exist to the same extent at Aberdeen, Dundee, Leith, Glasgow, Liverpool and all Ireland. Scotland and Ireland have ceased to a large extent from being wheat producing countries, their climates being more suitable for oats, and the oat crop at present being more remunerative, hence those places will continue to take large quantities of Ontario patents.

So far as Ireland is concerned at the present juncture, political questions are disturbing the regular course of trade. Most of the Irish flour import trading is done through large import houses in Liverpool and Glasgow, some being bought by those importers for direct shipment to Ireland; others import to Liverpool and Glasgow, and re-ship to Ireland, but many of those houses just now, for financial and political reasons, are withdrawing their capital from the Irish trade, and in the near future there will be some changes from the past in firms that will do the Irish import trade. Ireland in the old stone mill regime was quite a large milling country, but different from England, very few mills have been changed to rolls and not likely to be, hence so soon as present political excitement is over and the country settles down to some basis of government, old or new, Ireland will continue to take a share of her breadstuffs in flour from Ontario. What she requires is a white 80 to 85 per cent. winter patent. In my next letter I will give a few hints how an export trade can be done with essentials to its success.

DAVID PLEWES.

LIVERPOOL, Eng., June 2, 1893.

THE FLOUR MARKET.

Flour has remained very quiet during the month. Prices have given no encouragement to exporters and at the same time the glutted condition of foreign markets has left little necessity for supplies even with prices favorable to the buyer. Everyone is wishing for an end of this lethargy, but it does not yet appear near by. The current issue of the Trade Review, of St. John's, Nfld., says: "Flour is unchanged, and the low prices ruling are likely to maintain. Wholesale men are still importing largely. The number of barrels imported this year is nearly three times as large as up to the same date last year." Local trade is not much more active than foreign.

PRICES OF FLOUR AND MEALS.

TORONTO: Car prices are: Flour (Toronto freights), Manitoba patents, $4.25 to $4.35; Manitoba strong bakers', $3.90 to $4; Ontario patents, $3.25 to $3.50; straight roller, $2.85 to $3.10; extra, $2.65 to $2.70; low grades, per bag, $1 to $1.25. Bran—$12 to $13. Shorts—$14 to $15. The Flour and Grain Trade Bulletin, of the Dominion Millers' Association, reports of Ontario flour: "Sales: Straight grades, $3 and $3.05: patents, $3.20, and 85% at $3.25 per barrel, f.o.b. for Lower Provinces. Bran—$11; shorts—$13.50 and $15 per ton. Shorts in good demand."

MONTREAL—Winter wheat, $3.90 to $4.10; Manitoba patents, best brand, $4.20 to $4.30; straight rollers, $3.40 to $3.55; extra, $3 to $3.15; superfine, $2.60 to $2.90; Manitoba strong bakers', $3.65 to $3.80; Manitoba strong bakers', best brands, $3.90 to $3,95. The demand for oatmeal is not very good, but stocks are small and while the market is firmer in tone, there is no change in quotations. Standard, bags, $2.05 to $2.10; standard, bbls., $2.25 to $2.30; granulated, bags, $2.10; granulated, bbls., $2.30; rolled oats, bags, $2,10; rolled oats, bags, $2.10; rolled oats, bbls., $2.30. The supply of bran and shorts is very small and dealers find it difficult to fill orders. Owing to the absence of any business of importance prices are unchanged. Bran—$14 to $15.50; shorts, $17 to $18; mouillie, $20 to $23.

MANITOBA: Little or no change in local flour markets. Patents, $1.95; strong bakers', $1.75; XXXX, 85 to 95c.; superfine, 60 to 70c. Miilstuffs—To the local trade, less than car lots, delivered at $11 for bran and $13 for shorts. Oatmeal, etc.—There is still considerable variation in price, rolled oats being quoted as low as $2 per sack, while some brands are quoted $2.15. Granulated varies from $1.95 to $2.15; standard, $1.90 to $1.95; cornmeal, $1.60 to $1.65; beans, $1.80 to $1.90 per bushel; peas, $2.40 to $2.50; pot barley, $2.40 to $2.50; pearl barley, $4 per sack.

J. F. McLAUGHLIN ASSIGNS.

GENERAL regret is expressed among the trade at the assignment of Mr. J. F. McLaughlin, grain dealer of the Board of Trade. The assignment was executed on 12th inst., Mr. W. A. Campbell being the assignee. Mr. McLaughlin came to this city several years ago from Mono Mills. The direct cause of Mr. McLaughlin's failure is attributed to the fact that he has been a large holder of Ontario wheat on which he has suffered considerable loss.

A SUCCESSFUL BUSINESS YEAR.

The sales of Magnolia Metal have been so enormous and the business so prosperous in the last year that the Magnolia Metal Co.'s stock has been recently made $1,000,000.

The elevator of the Moosomin Elevator Co., limited, Moosomin, Assa., has been sold to Mr. Hutt.

Office of the CANADIAN MILLER,
June 15, 1893.

THE GENERAL SURVEY.

MANY and varied have been the fluctuations of the market during the past month. Financial matters in the United States are in an uncertain state, and the effect of this uncertainty is being felt in every branch of trade. It is hardly apprehended that serious financial disaster will overtake our neighbors, but clearly the situation is suggestive of the utmost prudence and caution.

Already the speculator is counting the issue of the coming harvest. Every climatic condition influences his calculations, and where the weather fails to fill in the blanks correctly the imagination can usually do duty as substitute.

Whilst the statement is current that the world's wheat crop will be under the average of some years past, yet a conservative calculation would make it at least an average crop. The condition of the growing crop in Europe has improved encouragingly within the past few weeks. An excellent wheat crop is expected in England. A report from Russia is to the effect that the winter wheat in that country is excellent in 124 districts, good in 303 and bad in only 10, while the outlook for summer wheat in the other provinces is generally satisfactory. This is a big improvement from a month ago brought about by more favorable weather. On the other hand it has to be said that reports from France, Germany and Italy indicate that probably there will be considerable losses in these countries.

In Algeria and other parts of North Africa, again, the wheat crop has sustained great injury from drouth. Owing to the destruction of the crops of Algeria and Tunis no exports are expected this year from North Africa, except from Egypt. But the spring exports of wheat from Argentina are the largest on record. As regards India there is no room for doubt. The wheat crop there is already harvested, and is a little over 240,000,000 bushels, or 14,000,000 bushels under the average; but it is nevertheless expected that India will be able to export this year about 30,000,000 bushels.

In the United States the crop is being figured down below the average of the decade of 1880-90, that is under 450,000,000 bushels. But not a few wise heads express the opinion that this calculation is altogether too pessimistic. A month ago it looked as though the crop in Manitoba was going to show up quite light, but reports from those who have gone carefully over the field more recently and investigated conditions, points to a good yield in the Northwest. According to a late report of the Bureau of Industries, issued within the past week, and which we find place for elsewhere in these pages, crops in Ontario have suffered, more than had been anticipated, within the past month. Especially is this true of fall wheat. To this extent the general crop on this continent will be lessened by Ontario's probable failure.

How these conditions, which after all, it must be remembered may be materially altered by the circumstances of the next two months, are going to affect prices, is the pressing and present matter with many in view of the large surplus stock of grain still extant. Taking all things into consideration, so far as an opinion may be hazarded at this time, there are indications that prices will certainly not drop any lower and on the other hand that the tendency will be to an increase in prices.

CURRENT PRICES FOR BREADSTUFFS.

WHEAT—Toronto: (West and north points)—White, 64 to 65c.; spring, 61 to 62c.; red winter, 64 to 65c.; goose, 60 to 61c.; spring, Midland, 64 to 65c.; No. 1 hard, North Bay, 85 to 86c.; No. 2 hard, 83 to 84c.; No. 3 hard, 76 to 77c.; No. 1 frosted, 65 to 66c. Montreal: No. 2 hard Manitoba, 82 to 83c.; No. 3 hard do., 79 to 80c. Chicago: June, 65½ to 65⅝c.; July, 66⅝ to 66¾c.; September, 70⅞ to 71c. St. Louis: 64½c. July; 67c. August; 69½c. September. Duluth: No. 1 hard, 64½c. for July; No. 1 northern, 62¾c. July; No. 1 hard, 71c. September; No. 1 northern, 67½c. September; No. 1 hard, 64¾c. June; No. 1 northern, 61c. June. English markets: From Beerbohm: spring wheat, nominal; red winter, 5s. 7d. to 5s. 8d.; No. 1 Cal. 5s. 10d. to 5s. 11d.

BARLEY: The market is dull, prices nominal and unchanged and few sales reported. Toronto: "Feed" will find buyers at 35 to 36c., but very little offering; No. 1 obtainable at 45c. and No. 2 about 40c. outside. Oswego despatch says: The market for Canadian barley very dull; prices nominal in the absence of transactions; no receipts for shipments.

OATS: A bonanza has come to holders of oats within the last month, prices ruling in Montreal according to the Trade Bulletin as high as 39 to 39½c. per 34 lbs. afloat, and even as high as 40c., large quantities being sold at these prices. "The advance in prices," says our Montreal contemporary, "is due to the great scarcity of feed stuffs in Great Britain and on the Continent, in consequence of the severe drought there this spring; in fact, it has been the dryest spring on record in the latter country, the drought lasting from March 1st to the 1st week in May. Since then, however, copious rains have fallen all over England, although they came too late, it is thought to save the hay crop, and hence the continued demand for oats and hay from this side. So far, Canadian oats appear to have given good satisfaction in England judging from letters received by shippers here. Regarding the prospects for shipping Canadian oats to England, a great deal will depend upon the extent of the damage done by the drought. No. 2 White and Mixed Canadian have been selling at 17s. 9d. to 18s. per quarter, bringing 3d. per quarter over the No. 2 Russian and American. According to this, American and Russian oats must have a greater percentage of barley or other foreign substance than No. 2 Canadian. It is therefore gratifying to find that Canadian oats take the lead of foreigners, even if they have a percentage of barley mixed with them, as London receivers are not fools enough to pay 3d. more Canadian than Russian and American, unless they are worth that much more." Toronto current prices are quoted: 37½ to 38c. for cars on the track and to arrive. Montreal per 34 lbs. afloat 39 to 39½c.

PEAS—Toronto: Demand quiet, yet prices steady. Prices rule about 55½ to 56c. for cars or lots lying north or west. Montreal: Per 66 lbs. afloat 77 to 78c.

RYE—Toronto: Outside, 55 to 56c. Montreal: 63 to 64c.

BUCKWHEAT—Toronto: Outside, 50c.

CROPS IN ONTARIO.

The following particulars of the growing crop in Ontario are given in a bulletin of the Ontario Bureau of Industries dated June 1:

Both April and May were colder on the average in 1893 than in 1892, or than the average of the eleven years 1882-92. In May the rainfall was a little less than in May, 1892, but 0.59 inches greater than in the period 1882-92. The last two months have been colder and rainier than the average; in other words the growing season has been later than usual in Ontario.

Fall Wheat—The reports as to the condition of this crop were not so favorable on June 1st as on April 17, the date of the former bulletin. In some townships as much as one-half of the entire crop has been ploughed up, in others from one-third to one-quarter has been seriously injured by rain and frost; on the whole at least one-quarter of the crop of the entire province has been ploughed up and sown to other crops. Great variation is reported as to that which has been left, the best and most vigorous fields being those lying high or well drained. The lake Erie counties report fair prospects; Lake Huron and Georgian Bay under the average; and a high percentage ploughed up; West Midland, fair to good; East Midland, average. On the whole the returns for the province may be summarized thus: Acreage reduced at least one-quarter; growth backward; general condition variable; prospects on June 1st not quite up to the average.

Rye—Fewer reports than usual have been received as to rye. The crop, however, seems to have stood the winter and spring better than the fall wheat, and to be in a promising condition. The total amount of grain for the province will be small.

Spring Wheat—The continued rains of the late spring delayed sowing in most counties. In the north and north-eastern sections the larger portion of the spring wheat was yet to be sown on June 1st. The dry weather following the heavy rains crusted the soil so that in many places the young plants had difficulty in pushing through. As a result the fields were more or less patchy. That which had made growth was reported in fine appearance. The acreage will probably be about the same as last year. The prospects on June 1st were fair for what had made a start.

Barley—Sowing was in progress June 1st. In comparison with former years the acreage will likely be still further reduced. Nothing could be said as to condition, since very little was up above the ground.

Oats—Upon well drained and high lands oats were put in early, and such had a vigorous and promising appearance at the beginning of the month. Most of the crop, however, was put in late. An increased acreage is reported, especially from the Lake Huron and Georgian Bay counties. As far as it was possible to report, the returns were very favorable; in fact this crop was reported as the most promising of the grain crops on June 1st.

Peas—An increased acreage in Simcoe, Grey, Bruce and Huron is reported. A slight decrease in the counties of the West Midland and Lake Erie districts, owing doubtless to the past ravages of the "bug." As far as could be reported upon, the young crop was in fair condition.

C. P. R. ELEVATOR.

President Van Horne says: "The company have the plans all prepared for the new elevator to be erected at Winnipeg, and just as soon as the crop prospect warrants it we will go ahead with the construction, which I anticipate will be in a very few week's time."

FOREIGN LETTER BOX.

GREAT BRITAIN.

THERE is a growing impression in metropolitan markets that the crop coming forward is not going to be a very good one, and this impression is evidencing itself in improved prices. The trade are not unmindful of the fact that the quantity of grain afloat continues about as large as ever, but if the new crop is to be a failure one will not likely go astray in buying at present prices. This, at least, is the logic of not a few in the trade. American flour is in better demand. Hungarian is showing an advance.

BUDAPEST.

Prices for grain have shown an advancing tendency lately. Opinion is general that the new crop will be light, and it is this fact, combined with the impression that in other countries similar conditions will prevail, that is causing, measurably at least, this improvement. Flour has likewise shown an improvement, and a fair demand is found. The following letter from an English flour handler is quoted as indicating the preference in Great Britain for Hungarian flours over American flour, even though the price for the latter is lower. The writer says: "Don't fear for your country, for it is entirely impossible that Hungarian flour could be excluded from England by that of any other competitor. The high value of Hungarian flour lies not only in its extraordinary qualities—in some 'je ne sais quoi' not to be found in its other products, but especially in its reliable and everlasting equality. If I buy Hungarian 'Crowns,' or 'Tulips,' or any other brand, I am certain to get the same flour which I got years ago. That is the great advantage which Hungarian flour possesses over American and other manufactures, which mostly vary too much, so that one can never be sure if he will get a similar flour to that which he bought a week before."

RUSSIA.

Rains in increased copiousness have favored this country lately, and the prospects of the winter crops are much brighter than earlier in the season. Spring crops are coming along most encouragingly, and rye is in good shape. Prices of grain are influenced by European and American changes and change as the markets change abroad.

MINNEAPOLIS.

The flour mills here are increasing on their output of a month ago, and it is expected that the present average will be kept up for some time. The volume of output, however, is still behind that of a year ago. For the week ending May 31st, for example, the figures were 176,835 bbls. against 198,700 bbls. for corresponding period 1892, and in 1891, 128,230 bbls. The conditions of trade do not change, dullness continuing to be the complaint of dealers. The United Kingdom wants patent, and the continent, particularly Holland, bakers. The grain market is comparatively easy despite the general stringency of the money market.

WHEAT FOR EUROPE.

THE statement is made by the Milling World, that at the present time there are nearly 1,100 vessels on their way to Europe containing wheat and flour equal to 48,000,000 bushels of wheat. The United States is credited with having more wheat and flour-laden vessels afloat than any other country, the number being 288. Russia comes next with 245 and the Argentine with 237. India has 106, Chili 75, Australia 79, New Zealand 42, and Austria-Hungary 14. About two-thirds of the vessels are bound for the United Kingdom. The average passage from San Francisco is 135 days, although some sailers have been out already 180 days. Atlantic America is the nearest to Europe, the average time, by steamer, necessary to make the trip, being 13 days. Russia is 20 days off, India 32, Argentine 35 and Chili 55. It requires 130 days from Australia and 120 days from New Zealand. A large part of the wheat from the United States goes from the Pacific coast, the number of vessels on the way to Europe from there now being 157. The wheat from the Atlantic coast is mostly winter wheat. Owing to the high favor with which No. 1 northern is held by millers, generally, in the United States, who use most of it, it is kept above what importers generally can afford to pay for it.

NOTES AND QUERIES

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column. Correspondents need not give their own name for publication, but it must be made known to the editor. Anonymous communications will find space in the waste basket.

No. 40. BREAK ROLLS.—The query of a Manitoba reader of the MILLER regarding break rolls is very nicely answered in a short comment by J. W. Abram, in Milling, of Liverpool, Eng. He says: "Where the modern break rolls fail is in the objectionable shearing action, which produces both bran powder and chips, also small bran flakes, and at present it seems to pass the wit of man to so manipulate them as to obviate these evils, our object being to open out the kernel and tear out the inside with as little friction as possible and in the most granular form attainable; yet leaving the bran both broad and free from flour. If we could secure 90 per cent. of the endosperm in the granular form, over 80 per cent. of patent flour (so-called) would be an accomplished fact. Such a desideratum, if ever it is accomplished, would revolutionize the break process, for I cannot see how it is to be done successfully by using the style of rolls used at present, with their small diameter, angular flutes, and fast peripheral speed."

No. 41. ABOUT STEAM BOILERS.—It matters little all that has been written on the management of steam boilers, some new problem is continually coming up; or some one who has not learned on the particular point which is his worry seeks information. We give our readers the benefit of the following remarks by a writer on practical subjects in Power: "A boiler should never be blown out while hot. Portable tubular boilers should stand at least twelve hours after the fire is out before letting out the water. Stationary boilers should stand long enough to allow the brick walls to cool. I usually let my boilers stand from eighteen to twenty-four hours, and by so doing I keep the dirt in solution and can wash it out without any trouble. In case there is any scale I use a boiler pick and a good scraper. When there is any lime in the water, the latter should pass through a good purifier before being pumped into a boiler. Water should never be pumped into a boiler cold, as it makes hard firing and allows all the impurities in it to enter the boiler. In case the scale is hard, and can not be easily removed, saturate it with coal oil before filling the boiler with water. This will loosen the scale without harm to the boiler. A good skimmer properly constructed and properly attended to will do much toward keeping a boiler clean, but cannot be relied upon. All boilers should be opened and thoroughly cleaned once in two weeks, as they are often burned by relying on some automatic device for keeping them clean that fails to do its work."

No. 42. HOW TO PLACE THE KNOCK.—Mr. Robert Grimshaw, who always talks about mechanical matters in a thoroughly practical manner, and ever with a heap of good sense, makes this observation on how to place the knock: "I have been watching you, Bagley, with a great deal of interest as you have been endeavoring to locate that knock by sound. Whatever place you go to it seems to be in some other. Now, while your hearing is very sharp, there are some senses that are more acute than hearing, and feeling is one of them. Just take one end of this long lead pencil between your front teeth and rest the other end first on one place and then in the other about the engine, and you will find that you can hear through your teeth better than you can through your ears. You can detect differences in the amount of vibration that the ears would not be sensitive to, and you will not be fooled by the reflection of the sound from the walls, as in the case of hearing. I think that you will agree with me that the piston-head is a trifle loose on the rod, and that is a matter about which you will have to wait until shutting-down time before you can do anything. The lead pencil located it at once, and you were in doubt as to whether it was in the cross head or in the cylinder as long as you trusted to hearing."

A LOGICAL METHOD OF DRIVING.

THERE is still another method of driving, writes R. J. Abernathy, that, I believe, is being used by some makers of machines, and that is to drive one fast and one slow role with the same belt, using two driving belts, one on each side of the machine as before described. In the judgment of the writer that is the most logical, legitimate and only really mechanical way of driving a machine. It is simplicity itself, does away with all annoyances and complication; gives a steady, regular and uniform motion with an unvarying differential; and I unhesitatingly say to millers that when all other conditions are equal, roller machines so driven should have the preference. I know of no reason why all machines, no matter what or by whom made, cannot be so driven.

CHIMNEYS AND DRAFT.

IN this age of science and practical development, the form, size and proportion of furnaces and chimneys, to be the best for steam users, take a prominent place, says Noah J. Tilghman, in Power. All desire the greatest amount of steam from the ton of coal or cord of wood as the case may be.

I here propose to deal with practical results, regardless of theory, but whereever practice and theory go together, they shall be accepted. I think best to state my experience first as the shortest way to the facts. Although a mechanic and somewhat acquainted with water power and machinery before, I had my first experience with steam engines and the setting of steam boilers in 1854, when my partners and I bought an engine, two boilers and other machinery. We asked the builders to give us a draft for the setting of the boilers, the shape and style of furnace and chimney, size and proportions, and also to send us a competent man to superintend the work. When all was ready we went to work, but in a short time steam failed to keep up as at first. We cooled down to find the trouble, and found the boilers covered with a scale of soot. We cleaned it off, and went on as at first, but soon had to clean again. On examination we found that the part of the boiler plate just over the bridge brick walls was clear of soot, while between the bridge walls the boilers had the scale of soot. We had been instructed that these several walls (Fig. 1) were to form smoke chambers, and as the unconsumed gases or smoke would roll over the walls into the spaces, it would ignite again and make extra heat. Then a consultation was held. I proposed filling the smoke chambers with brick work up to the top of the walls. This was objected to, upon the ground that the builders ought to know the way to do it. Then I agreed to make the change at my own individual expense, and if not for the best, to change it back as at first; so I made the change. The boilers never had to be cleaned afterward, and steamed better than ever before.

The plan given for the chimney was that it should be at the base, inside, 24 inches square, and steadily enlarged as it went, which we were told would increase

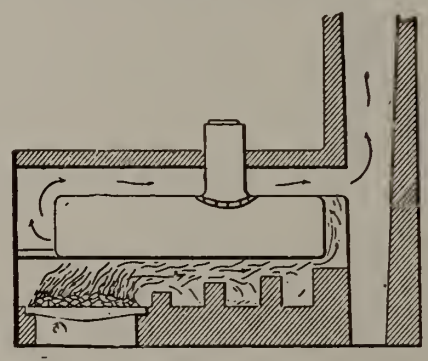


FIG. 1.

the draft. The chimney we never changed, but have found that it was not the best shape. This idea was in the mind of the old chimney builders for private residences to burn large sticks of wood. I have been a steam user ever since I began in 1854, but I have never gone back to the bridge walls.

In the year 1880 I was contemplating the building of another mill and wishing to know all about furnaces and chimney drafts, I went to several of the cities and visited the machine shops and chimney makers. But no one could tell me anything definite in regard to the matter. Quite a number said, "I can not say positively, but the opinion is that the chimney should commence with a suitable size at the base and enlarge somewhat as it goes up, but do not know all about it." So I went home knowing no more than when I left. But with a determination to know, I made a smokestack 12 feet long, 10 inches square at one end, and 12 inches square at the other end, and then built a furnace to set it on, with a fixture so that two men could reverse it, first large end up, second small end up. With fire in the furnace, we reversed it a number of times, and found that with the small end up it produced very much the stronger draft; when the large end was up, the draft was weak. This was the result at each and every trial. So with me the old draft theory was exploded.

I then examined many chimneys of various styles, from the mud and ladder to the fine brick, and inquired and found how each acted. With many of the fine chimneys with narrow smoke entrances, the draft was poor, and they smoked inside of the house too much for the comfort of the inmates. The mud ladder chimneys (the four sides of which had a frame much like ladders, the rounds being very close together and plastered with mud), were generally about three feet at the ground and

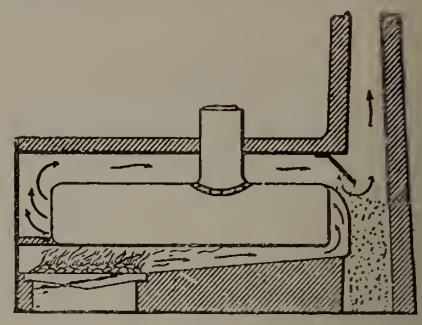


FIG. 2.

two feet at the top, and from 15 to 20 feet high. These chimneys all possessed an excellent draft, notwithstanding the high arch under which the wood was burned.

I then set about the building of the contemplated mill. I made my own plans for the brickwork but was warned and warned again by the bricklayers that my plan would not do. But the work was completed. Fig. 2 shows a side view, and, although not perfect, it will show the shape and style.

I will give a few facts that may be of interest to your readers. There were 20 feet of grate bar surface. At the farther end of the boiler the smooth brick pavement was seven inches from the boiler. The chimney at the base inside was 34 inches square; at the top it was 24 inches square, and 53 feet high. We used various kinds of fuel, green sawdust from a sawmill, chips from a planing mill, cordwood, hard and soft coal, coal dust, and other wastes from coal and wood yards. The draft was good, and the results all we desired. Here is the reason for it: first, if you fire a pile of wood the volume of blaze and heat will be greatest just where the flame leaves the wood, then it assumes a cone shape, so the nearer the inside of the chimney comes to fitting the tapering blast, the better will be the draft. If the chimney should be too large, or enlarged at the top, the cold air will fall in around the top and small end of the blast and weaken the draft.

A ship, to sail lively, must be free from barnacles. Water will run more rapidly through a smooth box or rough passage. So it is clear that from the grate bars to the top of the chimney the whole way should be made as smooth as possible. The bridge walls are a hindrance to a draft, and no good.

In the successful experiment just given, I placed a sheet of iron at the point where the blast enters the chimney, giving it a downward dash, which successfully threw all the sparks into the base of the chimney, from which they could be taken in the absence of firing. This chimney never sent out fire, although having a good draft.

CLEANLINESS IN THE MILL.

THE man that keeps his mill sweet and clean from basement to garret, says the Millers' Review, cannot fail to be a good man on general principles, and is a law unto himself. But there are a great many who do not keep their mills clean. They are careless, indifferent, and perhaps lazy. Such cannot be reached or moved by the ordinary influences that make some men better than others; but there is another consideration that ought to move them, and that is the safety of the mill. The cleaner the mill, the less the danger from fire, which ought to be a sufficient inducement for a sluggish miller to arouse himself. If there are no heaps of oil and waste accumulate anywhere on floors, on beams or on machines, if no flour dust is allowed to find a lodgment anywhere in the mill; in fact, if the entire mill is kept as clean as the godly miller voluntarily keeps his, the fire risk will be greatly lessened all round.

CANADA.

—Abel Wright, miller, Tp. of Holland, Ont., has assigned.

—There is some talk of erecting a new roller mill at Honora, Ont.

—John Holland, flour and feed, Miami, Man., sold out to L. Ironside.

—The grist mills of D. B. Meig, Farnham, Que., have been destroyed by fire.

—J. T. Burns, of Manitowaning, Ont., is putting rollers into his mill and making other improvements.

—Koester & Sons' flouring mills at Virden, Man., were burned on the 8th inst. The loss is $10,000.

—Floods caused damage to the flour mill of J. K. Breckenridge, at Mattawa, Ont., to the extent of $1,000.

—The mill dam at Thornbury, Ont., the property of Andrews & Co., oatmeal millers, was carried away by recent floods.

—Woodstock is agitating for a grain elevator. An effort will be made to have both G.T.R. and C.P.R. erect suitable buildings.

—Contracts have been let for the erection of the new flour mill at Marquette, Man., to be ready for operation in time to handle the new crop.

—McKay & Co., of Toronto, in their shipment of oats to Trinidad, mark their bags "Canadian Oats" to correct the notion that such products are all American. Good idea.

—A terrible hurricane passed over Tilsonburg, Ont., a fortnight ago, knocking in one side of Tillson's elevator and killing Mr. H. Joyce, an employee who was on the bottom floor.

—The heavy rains of the past few weeks caused the old Welland canal to overflow its banks submerging the lower floor of Norris' mill, St. Catharines, Ont., and damaging 100 barrels of flour.

—The warehouse at Sidney, Man., was blown over a fortnight ago, bursting it open and spilling 5,000 bushels of wheat which a Mr. Clifford had stored in it. Dr. Grouse, of Fergus, Ont., owns the warehouse.

—The newly elected directors of the Whitewood Milling Co., of Whitewood, Assa., are: B. Limoges, J. J. Knowler, E. Jannet, H. De Soras and Alexander McKenzie. The company is doing a good business.

—The first Duluth wheat, comprising 80,000 bushels, reached Montreal on 30th ult., and this was followed next day by 100,000 bushels, with 100,000 bushels from Kingston. During May 1892 the traffic amounted to half a million bushels, while the figures for the same month this year have gone beyond a million and a half.

—T. G. Shaughnessy, vice-president of the Canadian Pacific railway, says: "We expect to complete our line from Vancouver to St. Paul (the "Soo" extension) by August 1. We shall make the run in less than seventy hours, and expect to develop a large business, as the line will be first-class in every respect. We will build through the Crow's Nest Pass, but that will be later on."

—A special from Fargo, N.D., says: Attachments have been served upon all the elevators and other property of the Northern Pacific Elevator Company in North Dakota. The suit for which these attachments were issued claims that $400,000 is due and it is brought at the instance of banks in Montreal, Minneapolis and Duluth. There are fifty elevators belonging to this company in North Dakota. The headquarters of the company are in Minneapolis.

—A Montreal despatch says: It was stated at the board of trade meeting that a correspondent from Prince Edward Island wrote advocating that grain imported for seeding purposes should be placed on the free list, and asking that the council use its influence with the government to secure such change with the view to leading to a larger production of a superior quality of grain. The council rather favored the idea and decided to reply that if the local board of trade of Prince Edward Island would take the matter up they would support it.

—The grain trade has had a sensation in the disappearance of Leon M. Carrier, commission merchant, of Quebec city. He was accustomed to purchase from millers in Ontario, and sold in Quebec. About two weeks ago he visited Ontario, and purchased, it is said, about fifty carloads of flour and grain. Upon his return to Quebec he called upon most of the flour and grain merchants and told them that he had purchased at great advantage in Ontario, as the merchants of that province were demoralized with the state of trade. As he was offering at 2 to 2½ per cent. below the current market prices he did not have much trouble in making sales. A few days after his arrival large shipments of flour, grain and seed arrived, but as the goods had not been paid for they were not shipped to Carrier's order, but to that of the banks, viz., the Merchants', the Quebec, Montreal, Union and National. Nevertheless, without the production of the bills of lading, Carrier had no trouble in having the goods delivered by the Canadian Pacific Railway clerk. The cars were unloaded, and their contents delivered to the purchasers, who, not having the slightest suspicions of the transactions, paid Carrier, and the latter after having collected about $30,000, took his departure by the Canadian Pacific Railway 10.30 p. m. train. Before leaving he had told some of his friends that other cars would arrive in a few days, but he had to go to Cobourg where he was summoned as a witness. His wife went to see him off expecting to see him back in a few days. He was next heard from in New York where he drew upon a leading Quebec firm for $600, but as the firm owed him nothing the draft was not acknowledged. In the meantime the banks are holding on to their bills of lading. Carrier is about 25 years of age and was supposed to be doing a good business. He lost some money on the Chicago markets.

PERSONAL.

Mr. Thomas Martin, miller, has been elected president of the recently organized Board of Trade, at Mount Forest, Ont.

Mr. Nummie, head miller in the flour mill at Austin, Man., is leaving to take charge of the farmers' mill at Portage la Prarie.

The death is recorded of John McRae, of Renfrew, Ont., at the ripe old age of 84. Mr. McRae was born in Scotland, and came to Renfrew many years ago, where he successfully carried on a grist mill for a number of years, but of late years has lived a retired life.

The Northwestern Miller, of Minneapolis, celebrated its twentieth birthday on June 1st by an At Home in its new offices in the New York Life's arcade building. The CANADIAN MILLER tenders its congratulations, with the sincere wish that our contemporary may live to see many more like happy occasions. It merits them all.

CHAFF FOR THE DUSTIES.

—Both millers and newspapers that print their circulations are after a "high water mark."

—A great many people who look for credit at the corner grocery believe in a flour trust.

—If a miller lends his grain bags to a farmer, when he knows they will not be returned, he is a sucker.

—The man who said that he made a barrel of merchantable high grade flour out of 4 : 8, is a rail spelt backward.

—If a miller pays cash for stock and puts out his products on credit, he will, in the course of time realize a busted condition.

—Nothing resembles an extenuation of elongated veracity so much as a claim to make a barrel of good flour out of four bushels of wheat.

—"People are always hard on me," said the wheat. "I'm always being thrashed." "Oh, I'm shocked," said the corn, and thereupon assumed a rye face.

—"What makes your bread so heavy?" "Well, my wife made it. She's a literary woman, remember. Some of her work must have got mixed in the dough!"

—"What a tremendously fast eater a miller must be! He doesn't chew his food at all." "What makes you think so?" "Bolting his meal is a regular practice with him."

Bob—"I hear that Jenks is engaged to a miller's daughter. I suppose it's a money affair. Job—"Yes. Jenks knows the miller has lots of "dust," and no doubt he's out for it.

Of brothers six, most praised was Jim,
A good, industrious miller he,
How proudly all looked up to him,
The flour of the family!

—Miller—"You say he wants to go into partnership with me. Has he any experience?" Boomer—"Oh, he has been through the mill." Miller—"Who is he, anyhow?" Boomer—"A professional pugilist."

—Grocer—"It's one of those things no fellow can find out." Customer—"What is?" Grocer—"I once had a white dog about this place, and I couldn't keep him away from the coal-box. Now I've got a black dog, and he persists in getting into the flour-barrel."

—If a miller exchanges forty-two pounds of flour for a bushel of wheat that will only produce thirty-six pounds of a like quality to that given—thinking he has a-barrel-out-of-four-bushels-mill—he will get so far behind in the procession of money makers that he can neither see the flag wave nor hear the band play.

STEAM PUMPS

NORTHEY M.F.G.CO.LTD N E TRADE MARK

Duplex
AND SINGLE
Steam
AND POWER
Pumps

If you require a pump for any duty, of the latest and most improved pattern, and at close prices,

WRITE US

NORTHEY
M'FG CO.
LIMITED
TORONTO - ONT.

FLOUR, GRAIN AND COMMISSION MERCHANTS AND BROKERS

The Canadian Miller will not knowingly publish the cards of irresponsible parties. So far as we know, the following firms are thoroughly reliable.

THOMAS McLAUGHLIN

210 BOARD OF TRADE - - Toronto, Ont.

Flour, Bran —AND Shorts WANTED

ONTARIO AND MANITOBA WHEAT FOR SALE

C. GOODE

GRAIN and COMMISSION Merchant

ONTARIO AND MANITOBA WHEATS IN CAR LOTS

Consignments promptly attended to

62 FRONT STREET EAST TORONTO

ESTABLISHED 1859

WM. GALBRAITH

Commission Merchant

Flour and Grain

48 Front Street E. TORONTO

J. F. McLaughlin

FLOUR, GRAIN MILLFEED WHOLESALE

Send large samples and quote prices . . . .

MANITOBA WHEAT FOR SALE

Rooms 511 and 512 Board of Trade . . Toronto

STARK BROS. & CO.

BOARD OF TRADE BUILDING . . TORONTO . .

GRAIN DEALERS

Specialties: MANITOBA WHEAT MILLFEED AND COARSE GRAINS

Peer & Company

Flour and Grain Merchants

BOARD OF TRADE BUILDING TORONTO

LAWRENCE COFFEE THOMAS FLYNN

ESTABLISHED 1845

L. Coffee & Co.

Grain and Commission Merchants

38 Church Street TORONTO

Cooperage Stock

If you want Staves, Hoops, Heading or Liners

For Flour Barrels, Meal Barrels, Apple Barrels, Salt Barrels, Bean Barrels ..... or any other kind of Barrels, write to .....

.... THEY MAKE THE BEST STOCK ....

SUTHERLAND, INNES & CO., CHATHAM, ONT.

THE CANADIAN PHOTO-ENGRAVING BUREAU

16 Adelaide St. West, TORONTO

We have the most complete establishment in Canada, and by our different processes are enabled to make cuts for every and all purposes.

HALF-TONE CUTS made direct from photos our specialty.

LINE CUTS for Newspaper and other advertising purposes.

Send for Catalogue and Prices.

MOORE & ALEXANDER, Props.
TEL. 2158

John J. Dixon & Co.

. . . BROKERS

Canada Life Assurance Building

Toronto

Orders executed on the New York Stock Exchange and Chicago Board of Trade.

Private wires direct to New York and Chicago.

TELEPHONE 2212

USE

MYERS' ROYAL CATTLE SPICE

TESTIMONIAL.

DEPARTMENT OF AGRICULTURE, ONTARIO, Toronto, March 17th, 1893.

Gentlemen,—We have used Myers' Royal Cattle Spice during the present winter with both cattle and sheep. It seems to be equally valuable for both. I noticed especially the benefit on a lot of yearling rams. The change in their appetite and appearance was easily perceived after the first week or ten days' feeding, and they have steadily and rapidly gained since.—Yours very truly, (Signed) JOHN DRYDEN.

Messrs. Myers & Co., Toronto.

DUST! DUST!

Gibbs' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust. Invaluable to operators in every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel plated protector by mail, $1.00; postage 5c. Circulars free. Agents wanted.

Gibbs' Respirator Co., 36 LaSalle St., Chicago.

EMBRO OATMEAL MILLS....

ROLLED OATS STANDARD —AND— GRANULATED OATMEAL

MADE FROM SELECTED WHITE OATS.

Special terms made with Flour Millers for re-shipment with carload flour.

D. R. ROSS EMBRO ONT.

FLOUR BARREL STOCK

...STAVES HEADING... —HOOPS—

AYTON, ONT. N. WENGER & BROS.

RESULTS —COME FROM— ADVERTISING —IN— Canadian Miller WRITE FOR TERMS.....

WANTED AND FOR SALE

TO MILLERS AND GRAIN EXPORTERS.—Advertiser wishes to represent a good miller or grain merchant in the London market on commission; references exchanged. J. H. BAILEY, Sr., Brentford, London, England.

GRIST MILL FOR SALE

STONE PROCESS; DOING A FAIR BUSINESS; ample water power. Will be sold cheap. For particulars apply to

G. M. SHEPLEY,
Falkirk, Ont.

FOR SALE

33 IN. GIANT WATER WHEEL, RUNS against the sun, has division plate; good as new; also lot of heavy iron spur and bevel gearing. Apply

TORONTO RUBBER CO.
OF CANADA, LTD.,
28 King Street W.

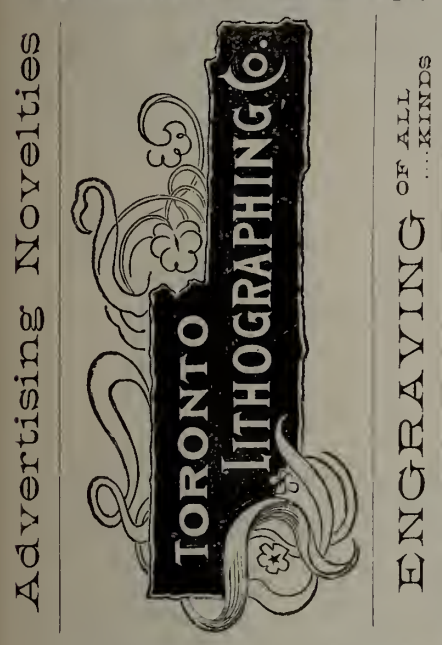
TO MILLERS

FOR SALE

"NATIONAL ROLLER MILLS," BRUSSELS, Ont.; capacity 100 barrels per day. Cheap, easy terms of payment. Address

"B.C.," P.O. Box 566, Toronto.

BARREL LABELS



MILLERS' & MANUFACTURERS' INS. CO.

ESTABLISHED - 1885

32 Church Street, Toronto

The President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said: I have much pleasure in drawing your attention to the fact that this company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

Up to the present time the insurers with this company have made a saving, when compared with the curreent exacted rates, of $91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to $21,522.72.

Besides achieving such result, we now also have, over all liabilities—including a re-insurance reserved (based on the Government standard of 50 per cent.—(50%), a cash surplus of 1.93 per cent. to the amount of risk in force.

Such results emphasize more strongly than any words I could add the very gratifying position this company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report.

The report was adopted, and the retiring Directors unanimously re-elected. The Board of Directors is now constituted as follows: James Goldie, Guelph, president; W. H. Howland, Toronto, vice-president; H. N. Baird, Toronto; Wm. Bell, Guelph; Hugh McCulloch, Galt; S. Neelon, St. Catharines; George Pattinson, Preston; W. H. Story, Acton; J. L. Spink, Toronto; A. Watts, Brantford; W. Wilson, Toronto.

HUGH SCOTT, Mgr. and Sec'y. THOS. WALMSLEY, Treasurer.

FIRE PROOF
ROOFING
ILLUSTRATED CATALOGUE *FREE*
METALLIC ROOFING Co
MANUFACTURERS. TORONTO

CANADIAN LUMBERMAN'S DIRECTORY

AND INDEX TO THE PLANING MILLS AND SASH AND DOOR FACTORIES OF CANADA. . . . . .

THE Publisher is now open to receive subscriptions for the above Directory of the lumber trades. No effort is being spared to make this publication thoroughly complete and reliable in every detail, and it is hoped that all MILLER subscribers interested in the manufacture of lumber, staves, heading, etc., will write at once for particulars. It will cost nothing to have name and business inserted in Directory. Blanks and all particulars sent on application.

Address all communications to

DIRECTORY DEPARTMENT,
CANADA LUMBERMAN,
TORONTO, ONT.

. . . THE . . .

FLINT & PERE MARQUETTE RAILROAD

FROM

Port Huron and Detroit

Is the Short Line to

SAGINAW AND BAY CITY

(Centres of the vast lumber interests of Michigan)

MT. PLEASANT, CLARE, REED CITY
BALDWIN, LUDINGTON, MANISTEE
AND
MILWAUKEE AND MANITOWOC, WIS.

The last two named are reached by the Company line of Steamships across Lake Michigan.

The line thus formed is a short and direct route from

NEW YORK, BUFFALO, MONTREAL, TORONTO

to ST. PAUL, DULUTH and Pacific Coast points.

Write either of the undersigned for Folders, which contain Maps, Train Schedules and much information of value to those contemplating a trip to any of the above-mentioned points.

W. H. BALDWIN, JR., General Manager. W. F. POTTER, Gen'l. Sup't.

A. PATRIARCHE, Traffic Manager.

GENERAL OFFICES: - SAGINAW, MICH.

JAMES DICKSON

FINANCIAL AGENT
ASSIGNEE
COLLECTING ATTORNEY
ETC.

Room 17 Manning Arcade

. . Toronto

—TELEPHONE 65—

35 CENTS

BUYS

FISHER'S GRAIN TABLES

—192 PAGES—

The book contains more valuable information and useful tables for Farmers, Millers, Traders and others than any similar book of its kind ever published, besides being a complete Ready Reckoner showing the value of articles or lbs. from one to 500; from a quarter of a cent to $2.00. Also tables for Grain, Hay, Rent, Board, Wages, Interest, etc.

Write for sample copy.

THE CANADIAN MILLER,
Toronto, Ont.

FRED. ROPER

Trustee, Accountant, Auditor, etc.

QUEBEC BANK CHAMBERS

2 TORONTO STREET 'Phone 1714

Send for sample of our new SAWMILL BELT

3½ Cents a day—

That isn't much money, is it?

About twenty-five cents a week or so.

And a man must be pretty hard up if he hasn't that much to spend every week.

Times are hard, they say; but if they are hard now to your family and yourself, what will they be to your family without you?

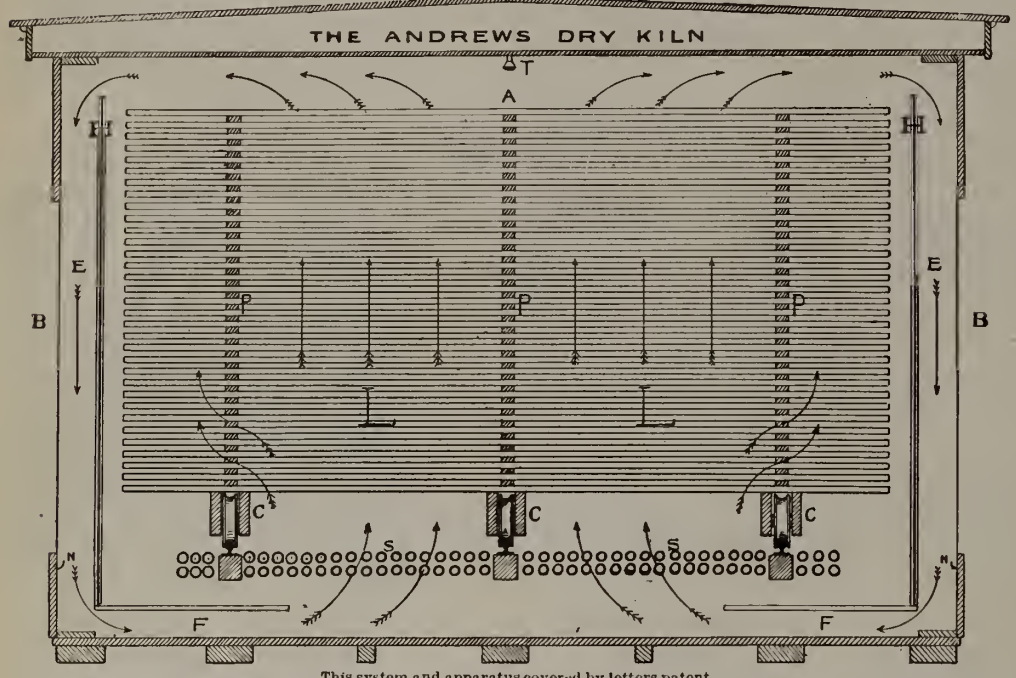
That's worth thinking about.

We think that no man should be without life insurance when it can be had at such a low rate as 3½ cents a day from the Manufacturers' Life, Yonge Street, corner Colborne, Toronto.

Write to us and we will give you all particulars.

THE ANDREWS DRYER

For Lumber, Shingles, Staves, Heading, etc.



This system and apparatus covered by letters patent.

A—Drying-Room. **BB**—Brass Condensing-Walls. **CCC**—Lumber Cars. **EE**—Down Air-Flues. **FF**—Bottom Air-Flue. **HH**—Inside Walls, protecting metal from heat. **LL**—Lumber on cars. **NN**—Brass Gutters for receiving condensed moisture. **PPP**—Sticks between lumber. **SS**—Double Steam-Coils. **T**—Automatic Steam Fire-Extinguishers. Arrows show direction of currents of air.

THIS DRYER

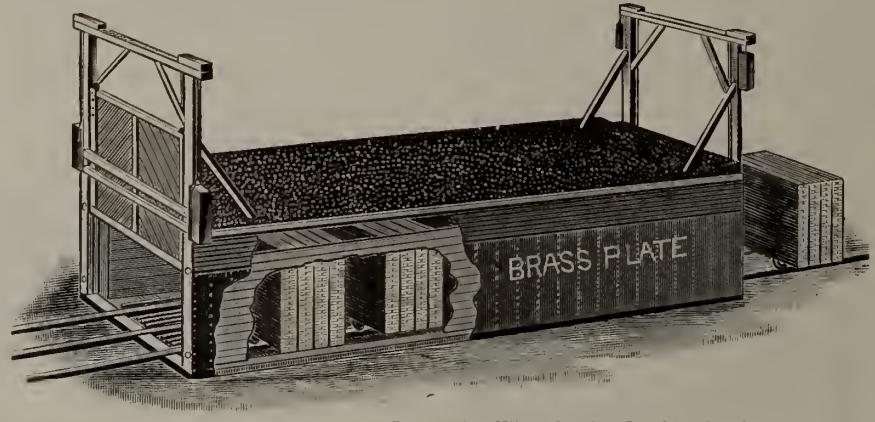
HAS PROVED TO PURCHASERS TO DO WHAT IS GUARANTEED IN SAVING THEM MONEY IN

Freight, Insurance, Time, Interest, Expense, Capital, Yard Room, Labor

There may be persons who do not appreciate the advantages of the artificial drying of lumber. But the shrewd men, in the manfacture of furniture and other woodwork where reputation would be sacrificed by a lack of proper m terial for good gluing and finishing, recognize a good system of drying as an important element of their success. High scientific authorities and thoroughly practical men are now agreed that the hot-blast and rapid-current systems ARE WASTEFUL, and that steam heat is the only safe means for artificial drying. The mode of applying steam heat most efficiently and economically is therefore now the essential point. The Andrews Dryer accomplishes this result more surely than any other known system.

NO FAN
NO ENGINE
NO SMOKE
NO CHIMNEY
NO SPECIAL FIREMAN OR FUEL
NO EXPENSIVE BRICKWORK
NO RISK OF FIRE
NO CHECKING OR WARPING
NO CASE-HARDENING

. . . . **NO EQUAL** . . . .



Outside View of the Andrews Progressive Kiln, showing Lumber placed crosswise the building, on cars.

"WE PUT GREEN SPRUCE IN DRIPPING WITH WATER, AND IN EIGHTEEN HOURS IT WAS DRYER THAN LUMBER THAT HAD BEEN STUCK UP IN THE YARD ALL SUMMER."

This is the verdict of a Quebec lumber firm, and we can give equal results every time.

The Andrews Lumber Dryer

Has been proved to possess the following points of excellence:

1st. That its drying is rapid and perfect.

2nd. That external and internal checking and discoloration are entirely avoided by this method.

3rd. That the drying is done by a CONTINUOUS system and the temperature of the kiln is under absolute control at all times.

4th. That our Dryer is free from the varying air currents (always wasteful) incident to all fan and open-draft kilns.

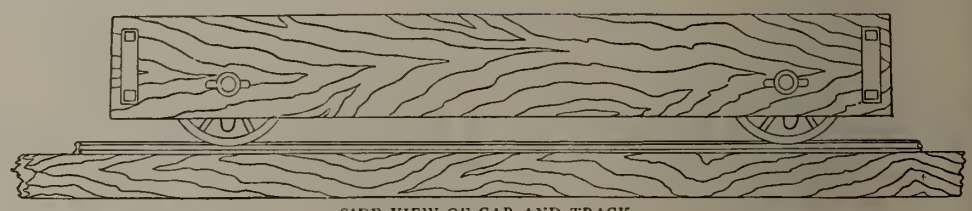
5th. That our drying is done by the slow continuous movement of a large body of slightly-moistened air.

6th. That our condensing surface is so very large as to be adequate to precipitating the moisture of the saturated air with the least amount of movement.

7th. That our piping is tested by high pressure and every outfit is fully guaranteed.

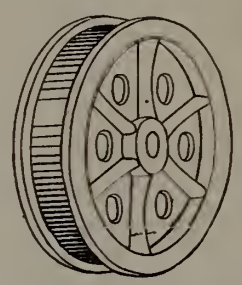
8th. That by our improved system of drainage the freezing of pipes becomes impossible.

SEND FOR CIRCULARS



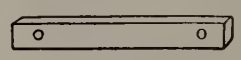
SIDE VIEW OF CAR AND TRACK.

DOUBLE FLANGE WHEEL ON SINGLE TRACK



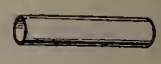
CAR WHEEL, DOUBLE FLANGE

SECTION OF CAR TRUCK, SHOWING AXLE BOX.



STRAP WASHER

BOLT



AXLE

DOMINION DRY KILN COMPANY

CANADA LIFE BUILDING : : : : TORONTO, ONT.

BRANDS:

STAR : LINCOLN
CROWN
RED CROSS
CLYDE MILLS
SPARKLING RIVER

Unsurpassed for Uniform Quality

GREENFIELD MILLS + AYR. ONT.

D. GOLDIE, Prop.

Daily Capacity 500 Barrels

M. McLaughlin & Co.

Royal Dominion Mills

TORONTO

PATENT ◎
STRONG BAKERS
LOW GRADE
From No. 1 Hard
Manitoba Wheat

PATENT ◎
FAMILY FLOUR
LOW GRADE
From : :
Best Ontario Wheat

Bran, Shorts, Screenings

In car loads or mixed cars, delivered at any railway station

Send for samples and quotations

Royal Mills, capacity 1,800 bbls.
City Mills, 1,100 bbls
Glenora Mills, 1,200 bbls.
Goderich Mills, 1,200 bbls.
Seaforth Mills, 600 bbls.
Winnipeg Mills, 1,200 bbls.

DAILY CAPACITY

7,100 BBLS.

HIGHEST QUALITY

Hungarian Patents
AND
Strong Bakers'
FLOUR

FIRST PRIZE, DIPLOMA AND GOLD MEDAL, EXHIBITION, JAMAICA : : : :

W. W. OGILVIE
PROPRIETOR

HEAD OFFICE:
MONTREAL, QUE.

THE NORTH AMERICAN MILL BUILDING CO.

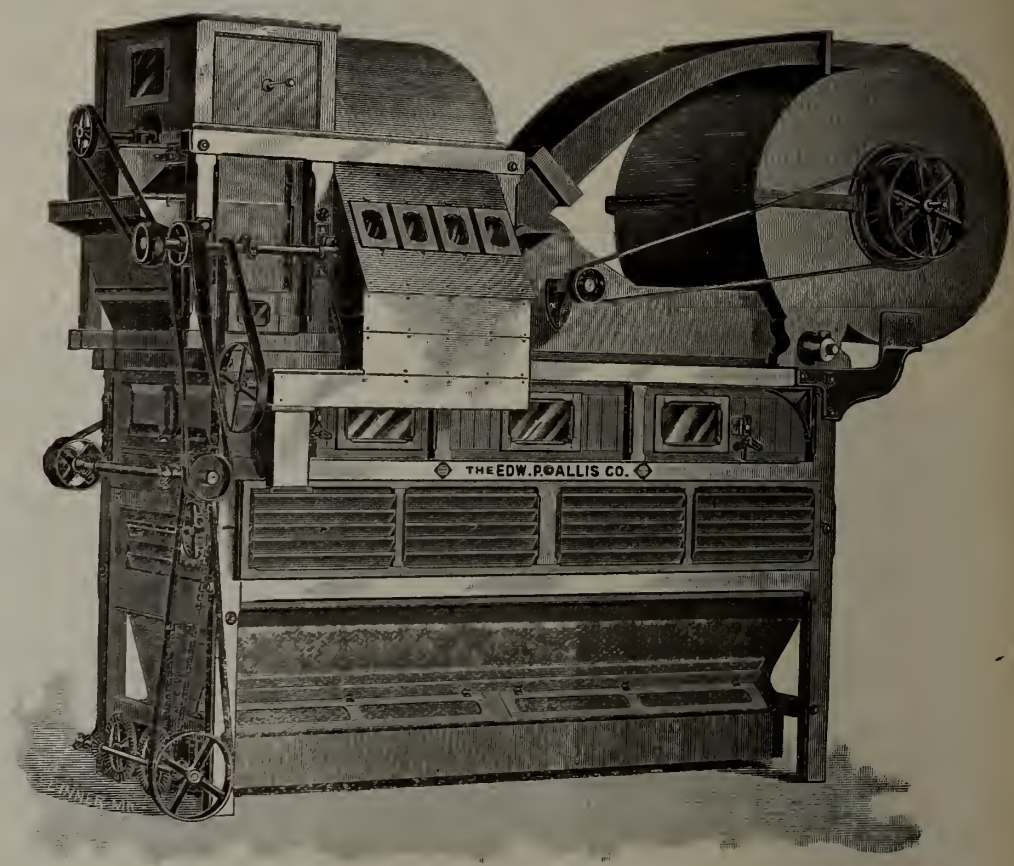
STRATFORD, ONT.

MANUFACTURERS OF

MODERN FLOUR MILL MACHINERY

On both Smith and Allis Systems

THIS engraving shows a Reliance [sieve] Middlings Purifier surmounted on the front by Reliance Air Purifier and on the rear by a Reliance Dust Catcher, making three machines in one, all driven by one belt and using only the floor space required for the Sieve Purifier alone. The middlings, as they issue from the Grader, are introduced to the Air Purifier which removes the loose bran particles, fuzz and dust, and the middlings then pass to the Sieve Purifier, where they are graded and re-purified, and the bran specs of equal gravity to the middlings which were not removed by the Air Purifier are now removed by the combined aid of the cloth and the graduated air suction of the Sieve Purifier. The impurities from the Air Purifier and from the Sieve Purifier are discharged separately. The Air Purifier returns its own air, and draws none from the outside. The Reliance Dust Catcher discharges its own air into the room. The removal of the impurities from the middlings by the action of the Air Purifier, relieves the Sieve Purifier of the hardest work and gives it greatly increased capacity.



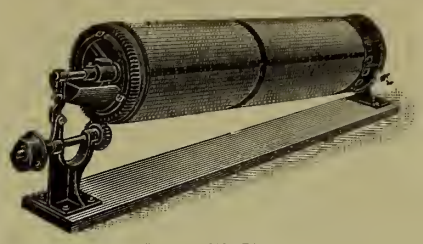
ALSO RELIANCE AIR PURIFIERS

As a System exclusively using a separate Purifier for each grade of middlings

If you are about to Build or Remodel a Mill it will pay you to
... correspond with us ...

North American Mill Building Co., Ltd. Stratford, Ont.

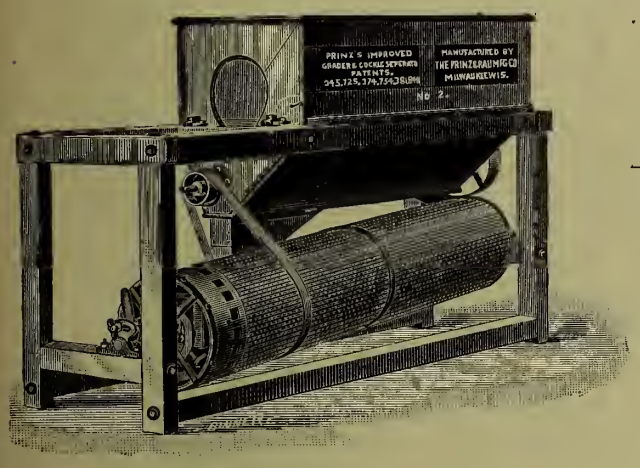
WORLD BEATERS



No. 1 with Stand

THE

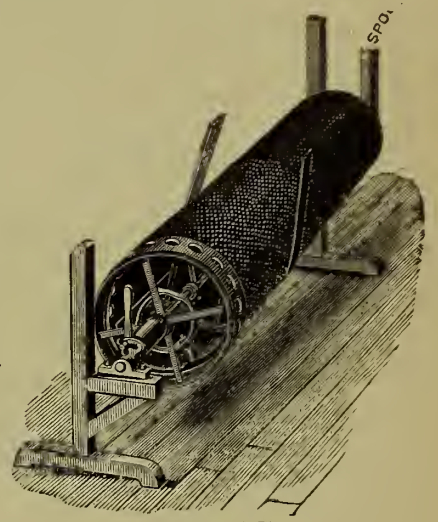
GENUINE PRINZ COCKLE MACHINES



Unique in principle

Effective in Operation

Unapproachable in Results

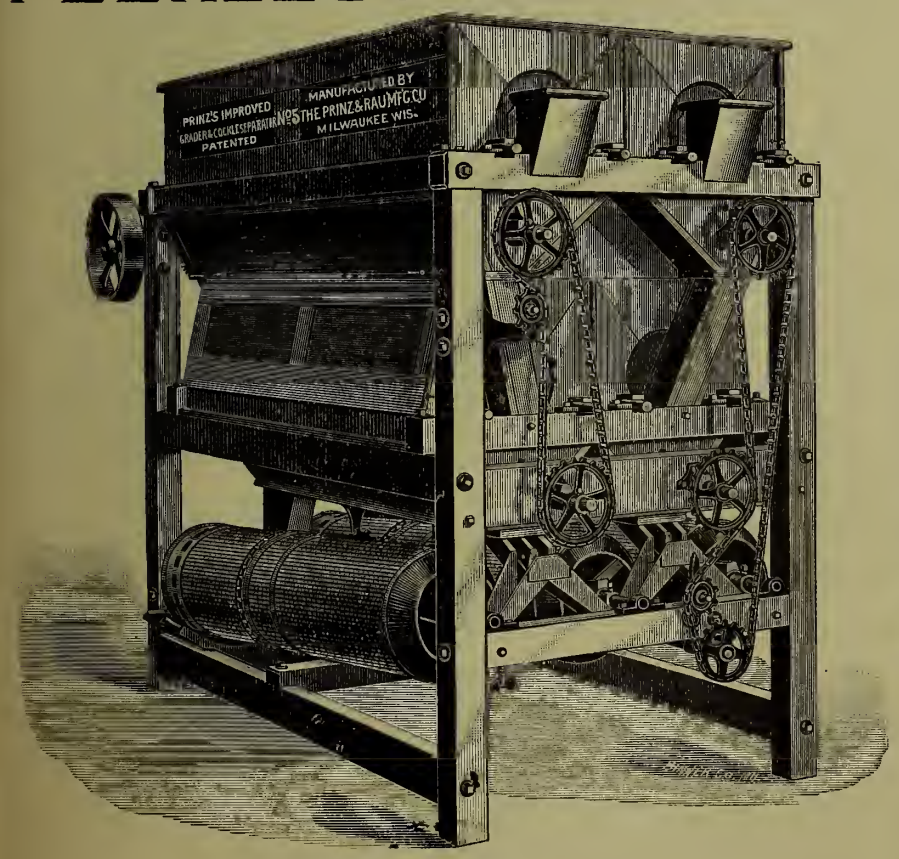


No. 1 without Stand

Steel Reels don't wear out. Peculiar Indentation makes Perfect Separation

The Inventor, Mr. Prinz, has studied the secret of grain cleaning, and followed every step with expensive experiments for about 15 years, and the machines now offered are complete in every detail, and guaranteed to do better work than any machine on the market

PEERLESS MACHINES FOR MODERN WANTS



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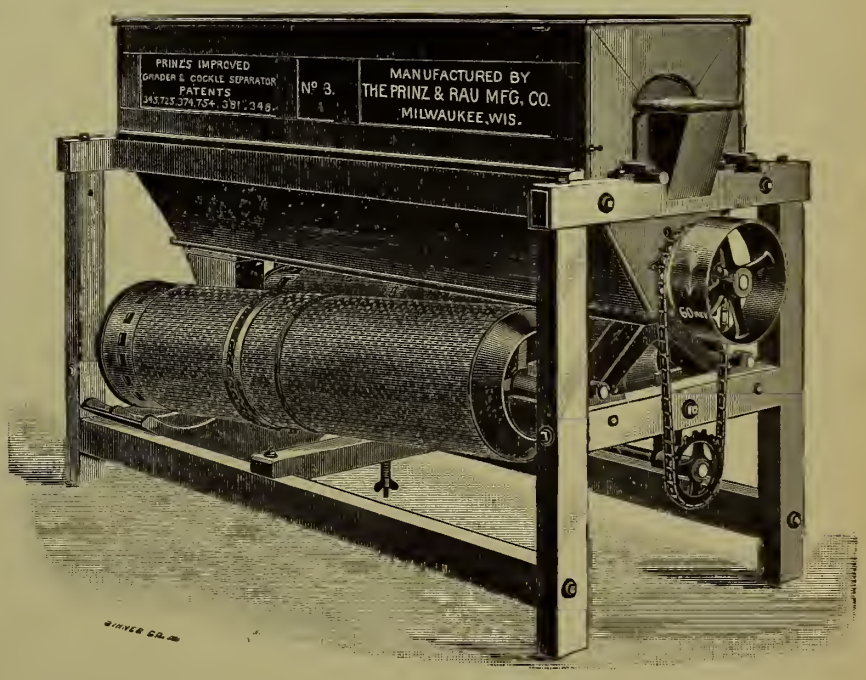

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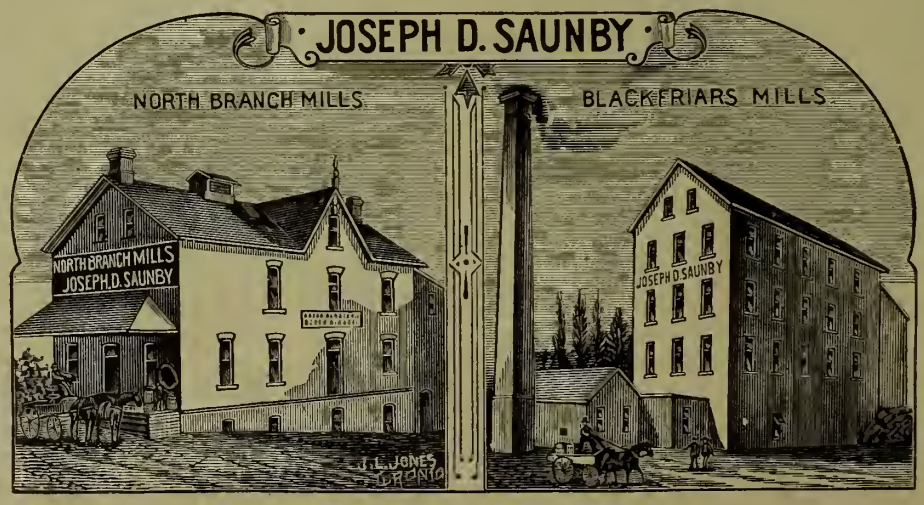

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In 1891 W. W. Ogilvie remodelled his Glenora Mills in Montreal, ordering at that time 135 Greey Machines, consisting of Rolls, Scalpers, Purifiers, Dressers, Bran and Shorts Dusters, Dust Collecters, etc., etc.

After operating these machines for about a year, he found that to produce the best results in his other mills it was necessary to equip them with the same machines. He therefore, without asking for quotations from any other firm, placed his order for upwards of 200 Greey machines for his Winnipeg and Royal Mills, making

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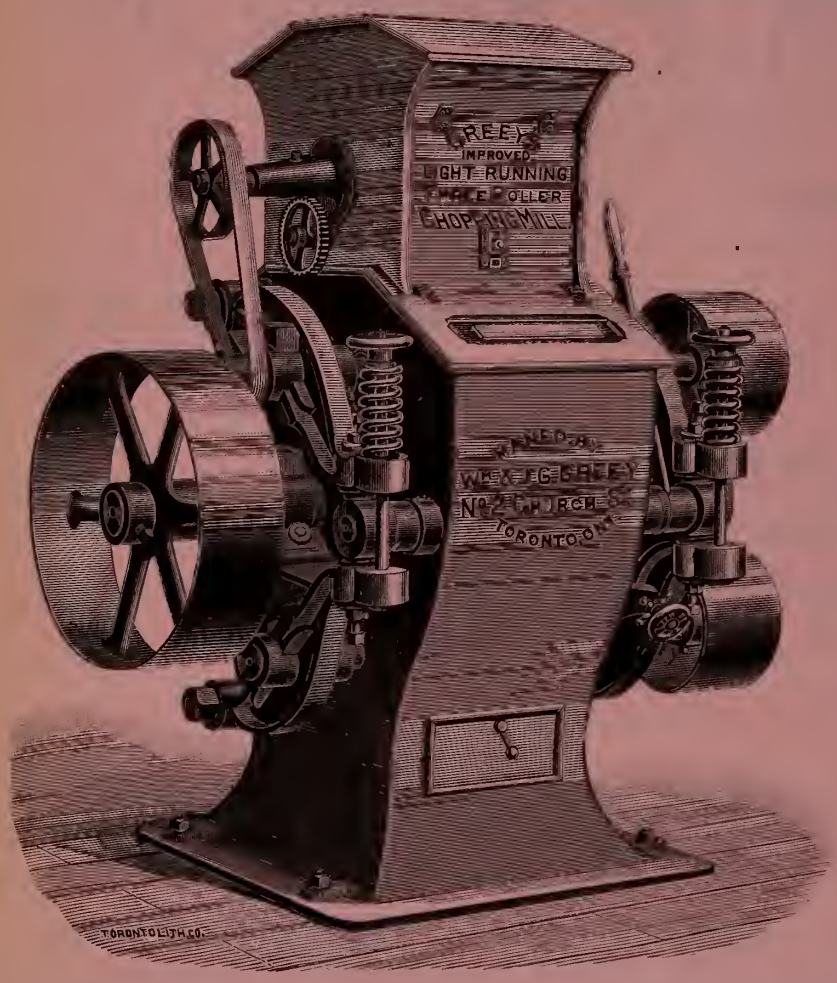

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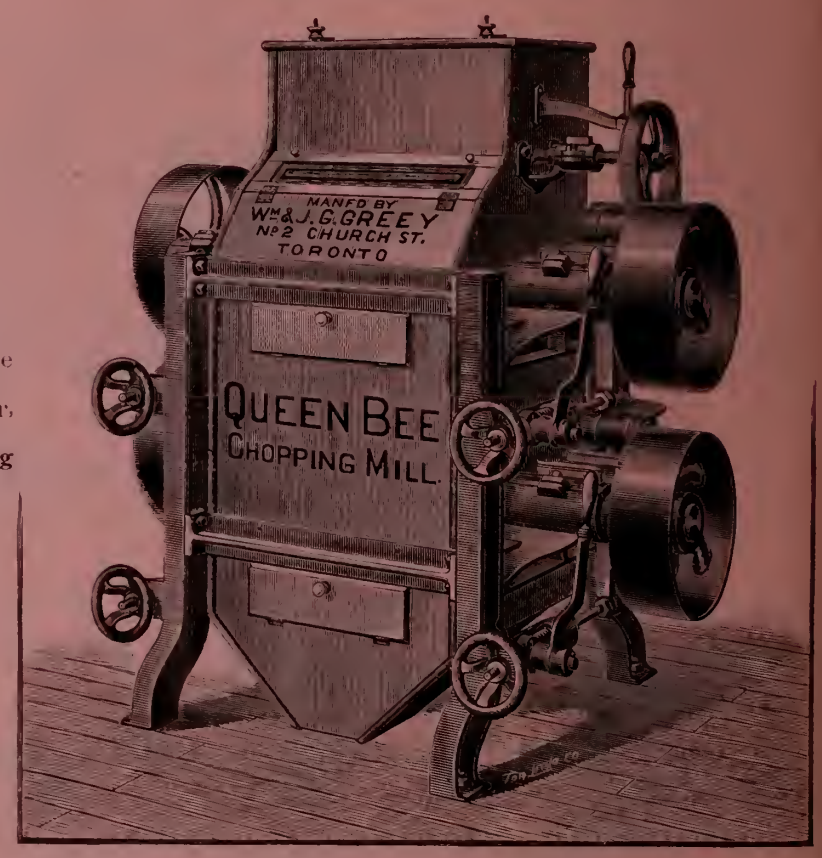
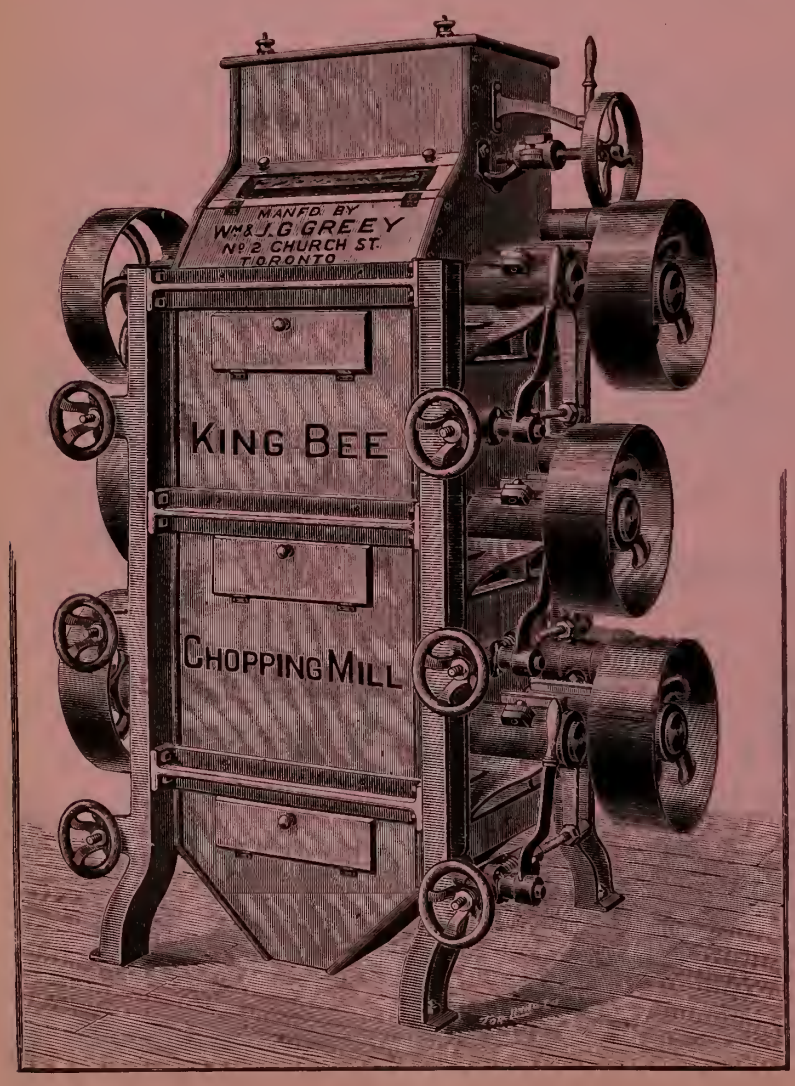


WHERE larger capacity and fine work is required the **Queen Bee** is the machine. But where immense capacity, fine, soft, mealy provender and oat hulls cut up to suit the most fastidious is needed, then the **King Bee** comes into play. They can also be adjusted to all kinds of work.



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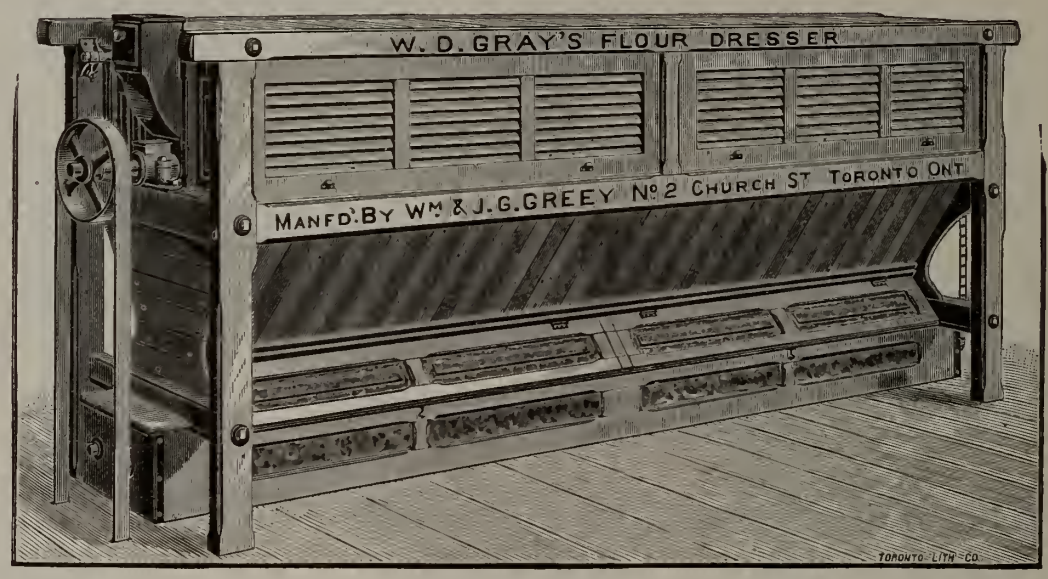

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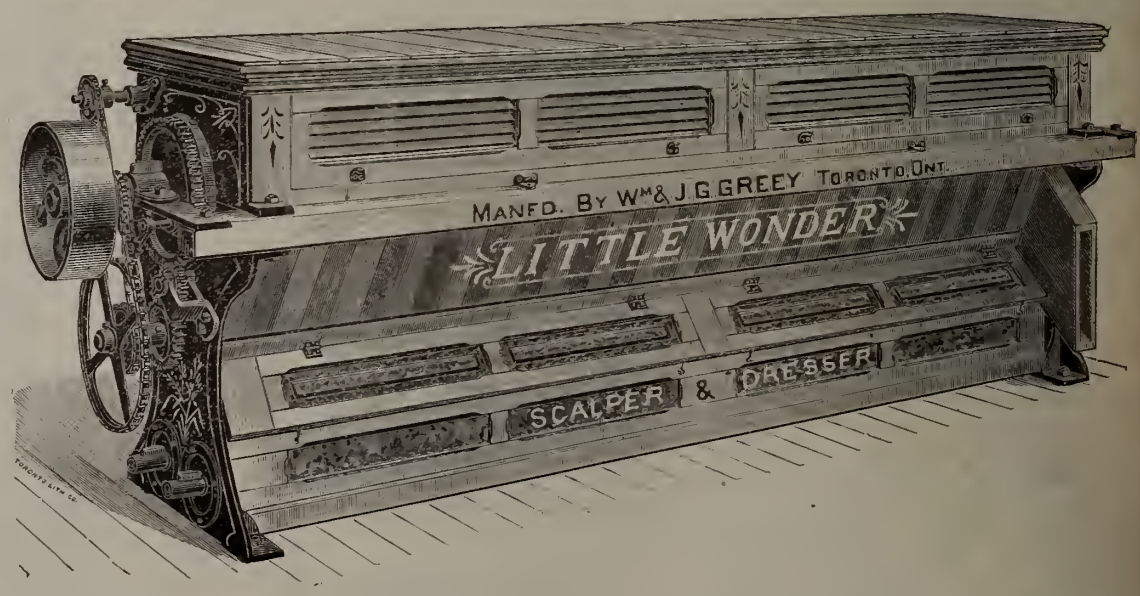

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THE CANADIAN MILLER

Old Series, Vol. XI. } Number 7.
New Series, Vol. III. }

TORONTO, ONT., JULY, 1893

{ Terms, $1.00 Per Year
{ Single Copies, 10 Cents

BY THE WAY.

THE farmer talks as though he was the sworn enemy of speculation in any form. Is he? A produce dealer hits at our good friend of the plow in this manner: "Talk about speculators, there isn't a greater speculator out than the farmer. If the price of any product goes up he never wants to sell; no matter how high the price, he always wants more. After the price begins to go down he wants to sell, and usually gets a lower price than he might have obtained." On this setting of the case the Rural New Yorker comments: "Unfortunately there is too much of truth in this statement. Every seller wishes to get all possible for his wares. This is natural and right, but it isn't reasonable to suppose that the price will be long sustained."

× × × ×

Mr. F. W. Thompson, manager of the Ogilvie Milling Co., Winnipeg, Man., in a recent interview, gives some interesting particulars of the operations of this big milling concern. He states that the improvements that are being made on the Winnipeg mill will make it one of the finest in America, the capacity having been increased to 1,800 barrels per day. Mr. Thompson also mentioned that improvements have been carried out in nearly all the company's eastern mills, resulting in bringing up their aggregate capacity to 8,200 barrels per day, thus representing one of the largest milling concerns in the world. The company have registered under the copyright law, special red, white and blue brands of twine, which are being manufactured for their use, so that hereafter the standard brands of flour turned out by this company will be put up in bags, sewn with these colored twines. Experiments are in progress for the testing of their flour at the mill before being shipped.

× × × ×

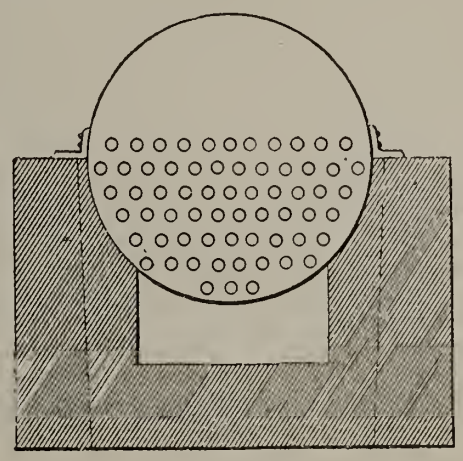
Writing from Buenos Ayres, Argentine Republic, Mr. Wm. Goodwin says, in the London Miller: "Low prices do not seem to stop the great increase of wheat acreage, and there is probably no country in the world where wheat can be grown to such advantage for export. The gold premium, of course, has the effect of making labor and rent cheaper and may decline, but the reduction in ocean freights by economical steamers is likely to be permanent, and the distances of railway haulage are very short as compared with the United States, so that railway freight is not a heavy item. Maize-growing is more dependent on the seasons and the destructive powers of locusts, which is greatest in dry seasons, but maize requires so little labor that small plots are grown all over the country, and the crop may any year be very large, and will always be difficult to estimate. Prices to-day are far above export basis, and there is no apparent indication of a surplus, but there may be 150,000 tons or more to spare, and at some unexpected time during the year prices may suddenly fall. It is to be noted that a good crop has this year ripened well in the south of this province, whereas in some previous years it was not good enough for export."

× × × ×

Even in the item of the bread we eat custom changes. Wheaten bread has almost from time immemorial been viewed as the staple of every meal and of every table, and the argument has been used that as population increased difficulty would be experienced in growing sufficient wheat to meet the requirements of those who people our continents. This is the proposition advanced by those statisticians who have averred that in the United States it would not be possible in a few years to grow sufficient wheat to meet the needs of the growing population of that country. It is forgotten, however, as a writer on this question points out that the breakfast table in the United States is now almost without wheat in any form. "The American breakfast," it is alleged, "is made up mainly of oatmeal, coffee, tea, eggs, meat, corncakes and fruits of various sorts. The dinner table is not much better, as the generally large variety of meat and vegetables makes a small call upon wheat bread. In this country, especially among the native-born citizens, the 'bread-meal' of Europe is unknown. In other countries the great majority of the citizens have little variety of food, and there they make their meal principally on bread, either wheat, rye, or some compound, with a bit of cheese and a mug of alcoholic beverage. European economists can not understand why the United States can go on annually exporting such enormous quantities of wheat, when their imaginary "per capita consumption" formula calls for the consumption here of all the wheat grown here. The explanation lies in the rich and varied diet of vegetable and animal foods so easily obtained here by all. American flour-makers are directly interested in the general food problem, because the ability to live without wheat bread belongs to the people of this country in a degree impossible anywhere else."

BOILER SETTING.

HAVING seen a way of setting boilers which is new to me, I send the inclosed sketch, writes a correspondent of Power. The bridge wall is run up to within 12 inches of the boiler, and the opening is only 34



BOILER SETTING.

inches wide—being proportioned about as shown in the sketch. The boiler is 54 inches in diameter by 14 feet long. If the boiler is ever burnt or blistered I think it will be at a point just over the bridge wall. Besides, I am of the opinion that this setting materially reduces the heating surface of the boiler shell.

MILLERS' MEETING.

THE dates of the annual meeting of the Dominion Millers' Association are August 9th and 10th. Place, Toronto; and every miller should be there. An attractive, and what will undoubtedly be, a profitable programme, has been prepared by the executive.

FLAVOR IN FLOUR.

IT is well enough to remember that you cannot get a palatable flavored flour from wheat, a part of which has been too closely garnered, put away too damp, or allowed to heat in bulk, or wheat diseased by smut. There is no treatment that will restore a natural flavor to such wheat; nor can the best miller and best mill in the world atone for a very small amount of the bad mixed with a very large amount of the good.

THE DEPRESSION IN WHEAT.

THE Cincinnati Price Current, remarking that prices of wheat have fallen to a level without precedent since American wheat markets have had any important relation to those of foreign countries, discovers as some of the inducing causes, miscalculations of official reports, concerning the extent of production in this country. Speculation hindering the outgo of the surplus the last six months with the culminating influence of the monetary situation affecting all carrying wheat, whether in warehouse or in the interior. Concerning the future it asks:

"On what basis can calculations as to the future of values be reasonably considered?" and proceeds: "It is plain enough that the winter wheat crop in this country is to be materially deficient—falling possibly 50,000,000 bushels below the average for the past five years, for which period official figures point to 323,000,000 bushels as the average, while it is doubtful if the production this season will exceed 270,000,000 bushels. This is not an estimate, not a prediction. The possibilities may be regarded as higher—but not the probabilities, in the light of acceptable evidence. The spring crop is surrounded with more of uncertainty. The start is fairly favorable, and the possibilities may be accepted as approximating the average indicated for the past five years, which official figures show to have been 163,000,000 bushels. It is not reasonable to count on a greater production than this, of spring wheat, nor an excess over say about 435,000,000 for the entire crop. This, it should be understood, is not an estimate, but may with propriety be considered as the reasonable basis on which to make calculations as to the future. With the surplus to be carried over the position in this view, will be practically equivalent to an incoming crop of about 5,000,000 bushels without available surplus from the preceding crop.

"This is the fair position to take as to the outlook on wheat supplies in this country for the incoming year. The domestic requirements may be reckoned as 370,000,000 bushels. The exportable surplus 130,000,000 bushels, if the minimum production be realized. The exportation for the year now closing will be about 185,000,000 bushels; the preceding year it was 225,000,000 and much smaller previously; for the past five years an annual average of 143,000,000 bushels.

"In Europe the outlook is for an under-average production of wheat this season, so that the chances are that if the production of wheat in this country should not essentially exceed the quantity herein suggested, the surplus for the year will in time all be wanted by foreign markets. But no urgency of demand is likely to arise in the early part of the crop year, and only problematically later. Investors, however, will not wait for an urgent demand. They will see the almost certainty of a fair recovery from the abnormal depression now existing, and this will not only check the downward tendency, but help in restoring confidence.

"There is nothing of the staple products of the earth so cheap as wheat to-day. Compare it with gold, with cotton, with animal products, with the market price of labor, and the relative position of wheat is found to be abnormally low. It is a creature of a combination of adverse circumstances and conditions, affected by influences which have measurably spared other products of industry, and the price of labor. A readjustment must be expected."

EXTENSION OF THE TROLLEY.

THE legislature of New York has appropriated $10,000 for the purpose of conducting experiments on the Erie Canal to determine the feasibility of the application of the trolley system to canal transportation.

THE Canadian MILLER AND GRAIN TRADE REVIEW

PUBLISHED ON THE FIFTEENTH OF EACH MONTH
—BY—
ARTHUR G. MORTIMER
OFFICE:
75 CANADA LIFE ASSURANCE BUILDING
TORONTO, ONTARIO

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

BEFORE TOO LATE.

THE words of caution to business men expressed by Mr. Clouston, general manager of the Bank of Montreal, in his annual address to the shareholders, are worthy of being "posted up in some conspicuous place" in every office, store, factory and mill, or wherever men do business. They are not the words of an alarmist. No attempt is made to shake confidence in the commerce of the country. On the contrary, it is very clearly pointed out that Canadians have large ground for encouragement in the shape they find trade and commerce. But we are simply warned that these conditions can be spoiled if we do not take into consideration other conditions that also have an existence. "The coming year." Mr. Clouston tells us, "must be a year of caution, also a period of economy, and that applies to governments, cities, and municipalities as well as the commercial community, for we have been spending too much money; too much in subsidies to railways; too much in expensive works; and there has been too much good money wasted."

Around about us financial affairs are perturbed. In Australia no release comes to the stringency in money, and wreckage of monetary institutions that have brought disaster, broad and deep, to that country within the past twelve months. Not since 1873, their own journals tell us, have financial conditions in the United States been in a more depressed and uncertain state.

There, troubles might to a large extent have been obviated, if "governments, cities and municipalities, as well as the commercial communities" had conducted their affairs on the lines that it is suggested will prevent Canadians from falling into a similar snare.

No matter how bright may be the prospects, if the drain on current capital is too large, a crippled treasury soon follows. This is where Australia stumbled. She has been spending money as a government and municipally for years far in excess of her ability to realize on the expenditure in any reasonable period. And when this is the policy of governments the individual citizen is invariably led into similar extravagances.

Canadians have not themselves been free from these faults, though we have not been hit in the manner of other countries. Let us see that we do not invite the disaster which in being forewarned we may escape.

BOOKING ORDERS AHEAD.

COMPLAINT is made that the millers of the United States are meeting with the same difficulties in filling orders for flour that we chronicled some months since as common to the flour handlers of London and Liverpool, Eng., and, Glasgow, Scotland. There the bakers would place their orders with the miller for some months ahead. If prices declined during this term, as has been the rule during the past twelve months, the baker kicked, and if he took the flour ordered, at all, it was only at a reduced figure. United States millers, we are told, are in many cases, carrying orders for three, six and nine months, and then, as with the British bakers, the sale is not completed except at a reduced price. The United States Miller commenting on these conditions says: "We fail to call to mind any other product, sold on the market, where the buyer is not bound equally with the seller. The miller, when he buys his wheat for future delivery, must not only sign a contract, but must also put up a necessary margin, in cash, as security against any advance in the market, and a time for delivery is specified. In case a longer time is wanted for delivery it is paid for by an increase in the price. This is the business-like method in which trading should be conducted. Flour, only, seems to be an exception, and as a result of the loose manner in which the flour trade is conducted, good customers are lost, for, in their desire to take advantage of any break in the market, they must buy of some other mill, for, if they buy of you, they know you will ship out the old orders first, on which they must meet a prompt loss. What if they buy of a new seller? They reap their profit at once, and you, in the meantime, are selling at low prices to some other miller's customers, and the flour you sold to your buyer at a margin is turned out to the low-priced customer. No wonder trade is demoralized and millers are blue." Canadian millers have everything to contend with in the shape of slow sales, and demoralized prices, but there is little, if any, trouble from booking ahead, as with their congeners of Great Britain and the United States.

EDITORIAL NOTES.

THE Montreal Journal of Commerce comes at the mendacious Buffalo Milling World in this fashion: "The Buffalo Milling World keeps up its sneers at Canada, making our Northwest a permanent target for its mendacious, elephantine humor. In its last issue it tells an English paper to "lay hold of facts when it tackles commercial matters." In the very article in which this sarcasm appears the Milling World makes 4 times 17 to be 66, and goes into elaborate calculations on that basis. We advise our snarling friend to learn the multiplication table 'before it tackles commercial matters.'"

THE Salvation Army cannot well be equalled for novel methods. The General is rich in resources and plans for the extension of the Army. One of the latest moves is a scheme for a big exhibit of grain in Toronto on the same dates as the Toronto Industrial. The Army purpose giving invitations on the first of September to hold harvest festivals throughout the country and every corp will be asked to send to the exhibition to be held at Toronto whatever they can collect in the shape of products. Manitoba being one of the finest wheat growing countries in the world they proposed asking the province to contribute a carload of the best Manitoba wheat. When the exhibit is over the intention is to turn it into flour, and in this way manage to supply cheap food and shelter to needy ones in connection with their Toronto and Montreal lodging houses.

THE annual report of the Millers' Tracing Bureau of the United States shows that for the year ending May 1st, 1893, the number of sacks traced have been 1,308,992, as compared with 970,831 sacks for the period from July, 1891, to May, 1892. During the past year the export business of most members is said to have been light as compared with the previous year. The prejudice and objection that the transportation lines showed when the bureau was first organized in furnishing information desired and otherwise assisting the bureau is said to have been successfully overcome. "The transportation people seem," says the secretary, "to have finally come to the conclusion that the bureau is not hostile to them, but is rather their friend and has no desire to interfere with the conduct of their business or trample upon their prerogatives."

THE aversion of young men in Jamaica to agricultural pursuits is greatly deplored by the Colonial Standard in an article of recent date. It may be remarked that Jamaica is not the only country where this aversion to follow the plough is common. In Jamaica, we are told, the soil is the sole source of industrial wealth, and a rare opportunity for getting on in the world is overlooked when the calling of the farmer is neglected. A difficulty, however, in securing the needed capital is pointed out as a serious drawback to farming in Jamaica, and the Standard suggests the establishment of an agricultural loan bank, which would advance money to tillers of the soil at moderate rates of interest, as is done by many of the Scottish banks. This suggestion was made not long since as a means of aiding farmers in Ontario, the purpose, however, was to relieve them of the exorbitant rates that it is alleged they are forced to pay the loan societies. Any practical effort that can be put forth to encourage the cultivator of the soil should have encouragement, for in Canada, as in Jamaica, the disposition to forsake the farm by our young men is disastrously prevalent.

THE crop bulletin, of the Manitoba Government, the first bulletin of the season, places the acreage of 1893 in comparison with that of 1892 as follows:

	1892.	1893.
Wheat	875,990	1,003,640
Oats	333,974	388,529
Barley	97,644	114,762
Potatoes	10,003	12,387
Roots	17,497	20,919
Fallowed for crop	250,255	274,588
Fall ploughed	325,717	473,410

These figures show a considerable increase over last year's average. The area under rye is 3,229; under flax, 9,637, and area under corn, peas, etc., 1,059. The total area under all crops is 1,533,262 acres, while that of last year was 1,341,270 acres, showing an increase of 211,992 acres. It is pleasing to notice that there is a decided increase in the number of acres fallowed, while special attention was given to fall ploughing. So much land being prepared for seed last fall has enabled the farmers to put in seed this spring in a very short period of time. Over 5,000 men are now employed as hired help, and reports indicate that about 2,000 extra men will be required to assist in taking off the harvest. It is expected that these 2,000 men will be obtained from Ontario and Quebec. The wages paid for hired help run from $15 to $25 per month with board. The bulletin reports great scarcity of female help, and every inducement will be offered to secure females from the eastern provinces.

IT is commonly remarked that there is no longer any money in farming. Wheat is down to sixty cents, the barley market is closed out to the Canadian farmer, thanks to the McKinley tariff, and fates are against farm products in general. Unfortunately it is too true, whatever the facts are regarding the farming community that many lines of business have been depressed of late years. Pessimists say there is no money in business of any kind these days. The man, however, whose liver is out of order, does not often reflect conditions as they actually exist. But of the farmer. According to Mr. B. E. Walker, general manager of the Bank of Commerce, the farmer's lot is not such a hard one. He says, referring to last year's grain crop: "The price of wheat was, of course, quite unsatisfactory. The Ontario farmer cannot raise wheat at these prices, but it is quite clear that he does not need to raise much wheat. From every part of Ontario our managers make pretty much the same report. The farmers have more than offset the low price for grain by the high prices for cheese and hogs. Or, we are told that the farmers, owing to the low prices of wheat, are year after year turning their attention more to dairying, cattle grazing, fattening hogs, or fruit growing. Again we are told that in many counties the farmers are still holding last year's wheat, and in some localities two or three years' crops of wheat. This may be a very foolish thing for a farmer to do, but let us bear in mind that he is financially able to do it. From the same counties we have the information—in fact, there are very few exceptions throughout Ontario—that the deposits in the banks are increasing, that farmers' notes for implements are promptly paid, that he does not want to borrow from the banks, and is meeting the interest, and to some extent reducing the principle on his mortgages. Also that there is no demand for mortgage loans, and upon mortgages subject to repayment many good farmers are demanding a reduction in the rate of interest."

VIEWS AND INTERVIEWS.

Size of The Tire.

As a means of providing improved roadways it has been made a law in Massachusetts that the tires of waggon wheels shall not be less than three inches in width. It has been found that the narrow tires cut deep into the road and soon render it quite unsafe for travel. Other vehicles come along and get into the same rut and cut further down aggravating the unfavorable conditions already existing. With the wide tire not only is the danger of cutting up the road reduced to a minimum, but the constant passing over of waggons with wide tires has the effect of a roadway roller of pressing down the material of which the road is composed and making it more solid and firm. Massachusetts' example could be followed by other municipalities with profit to the roadways of the country, and all who travel over them. Business men of quick intuitions will be ready to make another application of Massachusetts' example in the construction of roadways. A large number of men do not succeed in business. One reason is that their methods are constructed on the principle of the narrow tire vehicle. They have cut down into a rut and in that rut they travel every day. Such a thing as taking a new course where more progress might be made they never think of, for they are in a rut. The subject can be amplified ad nauseam, but the shrewd dealer will make his own application. The other fellow will remain in the rut and—stick.

The Labor Problem Clearly Stated.

What is the solution of the labor problem is a question that confronts one wherever one turns. Social economists have, and are, proposing many remedies, but the trouble grows apace. In every land, monarchial, republican, or otherwise, the unemployed embrace a large percentage of the population. What is to be done to relieve the pressure? Mr. Carroll D. Wright, a statistical writer of some eminence, has recently written of conditions in the United States. Relatively, his figures may be made to apply to Canada. His propositions are certainly clean-cut, vigorous and forceful. He estimates that in the States there are over twenty-two millions of persons who are "engaged in gainful occupations." "Subtracting from sixty-five millions," he says, "most of the wives and daughters, all of the decrepit and aged, and all the school children, it will be seen that we are a work-a-day nation in its shirt sleeves. The class of do-nothings because they have too much money, and the other class of do-nothings because they are born loafers, do not count for much either in number or influence." But Mr. Wright adds "that not only is the aggregate of those who do work on the increase, but also the aggregate of those who are willing to work, but can't get it. There's the rub. That is the reason for the existence of labor organizations, for strikes, and for the unceasing conflict between capital and labor. The remedy? There is but one. Skilled labor is nearly always in demand. A first-class workman is seldom out of a job. It is necessary, therefore, for the new generation to cease dawdling, to give up being jacks of all trades, to give themselves vehemently to some special department, and to become master of that. There never yet was a time when it was not easier to earn $4 a day because you are worth it than to earn $1 a day at work which a million others can do as well as you."

Market Quotations.

A question has been raised as to the position a trade journal should take in reporting current market quotations. The man who would like to use the trade journal to bull or bear the market to help his own particular schemes is known to the conductors of trade journals whatever branch of trade they may represent. It need hardly be said that the journal that would allow itself to be used by this class would soon lose the confidence of its readers. There is another class, however, who, though not taking so bold a position as the class we have already named, yet think there is less or more market news that should be given publicity very gingerly for the general good of the trade concerned. These people, says the Iron Age, hold that the trade journal "should hide bad news as long as possible and proclaim favorable developments with the utmost alacrity. When an advance has taken place it must be chronicled at once. A decline must be kept back, and quotations must remain stationary while still a stray buyer exists who has not heard of the lowering in prices. The true office of the trade journal, according to these critics, is to constitute the rear guard in retreat and the picket line in advance." All such suggestions are based on the theory that there is something to be gained by withholding part of the truth. Someone, it is true, will probably be a gainer in cases of this kind. It is equally true that someone will be a loser. A trade journal can never successfully perform its mission occupying the position of a mere time-server. As the journal from which we have already quoted further says: "We hold that it is the function of the commercial reporter to seek the truth persistently and diligently, and to present it fairly and candidly. If developments are unfavorable, the sooner their significance is generally understood the better. It will make the weaker sellers quicker to abandon hope and will make buyers more watchful of their opportunity, thus aiding in steadying the markets. The idea that secrecy was the only safeguard of merchants and manufacturers has been long since abandoned in all the markets of the great staples, such antiquated business methods being now regarded as childish. No one attempts the dangerous and unsatisfactory role of being the special guardian of any commodity, protecting it against untoward declines, or blowing it up during the brief days of expansion."

SHORT MILLING IN ENGLAND.

COMMENTING on the short system under the head of "Latter-day Break Systems," Liverpool, England, Milling says: In a recent number the question was asked, was there any "short system" of milling advocated in England. It is doubtful whether there is any actual short system advocated by any English milling engineer, but there is among most of them a decided tendency to shorten some of the operations in recently designed mills, and we think we may safely say that a 10-sack mill of to-day is projected and planned with fewer machines than a mill of the same capacity erected six or ten years ago. That part of the milling system that there is the most decided tendency to shorten is the breaks, and the effect of this is felt throughout every other part of the mill. It is interesting to trace the evolutions of the break system in gradual-reduction milling. Some of the earliest roller mills were built with four or at least five breaks, and many of them, especially those in which the output of the mill was kept within the designed capacity, continued to do fair work. In others, in which the output was increased, the break capacity was not found sufficient, and one or two breaks were added. This practice was followed in new mills, and six and in some cases seven break mills became common and continued the prevailing type for some years.

Then came the discovery that the much talked about "crease-dirt" had for all practical purposes no existence, and that the blue flour made in the first break "splitting" process was not crease-dirt at all, but was the result of imperfect wheat-cleaning. When this discovery was clearly understood, heavier breaking on the first-break rolls was inevitable, and was tried with such excellent results that some millers remodelled their break system by dividing their available roller surface into four instead of six breaks. This is undoubtedly a movement toward "short system" milling, but it has much to recommend it to the practical miller. As we have said before, theoretically, the products of the break system should be well-shaped middlings and broad bran; in practice it is not found possible to obtain these two products without an admixture of flour, fluff, bran powder, small bran and large "nubs," or middlings with particles of bran adhering to them. Now it is evident that the system which in practice produces the largest possible percentage of the two first-named products and the smallest percentage of the five last named is the best one for the miller to adopt.

We contend that this desirable result is produced by a well-designed four-break system. If this is intelligently worked, the break-flour will be very small in quantity, much smaller than in most six-break mills. In some of these the production of break-flour was excessive, chiefly because the miller seemed afraid to let his earlier breaks, where the best middlings should have been produced, do their full share of work, and from reasons that we could never understand, broke very slightly on his first three breaks, leaving far too much work for the fourth and fifth, with the result that these rolls are always over-fed, working hot, and consequently are making an abundance of flour and very few middlings. Small bran was also a result of this method. So much of the breaking was left to be done on the finely corrugated rolls that the bran was incessantly cut up by them, and the percentage of broad bran was very small. In a modern four-break system these evils are practically non-existent. With perfectly cleaned wheat it is possible to come down heavily on the first break without any fear of back flow, and with properly corrugated and speeded break-rolls a very large percentage of well-shaped semolina and middlings can be made with an almost infinitesimal percentage of break-flour. In addition to this the tail of the first-break scalper is left in such condition that they may be effectually cleaned by the remaining three breaks without unduly heating in the grinding or making small bran.

Thus we have proved by actual experiment a system well known to us, formerly working six breaks and making six sacks of flour per hour, yet notwithstanding this increased output on the same roller surface, the total quantity of break-flour is considerably less than before, while the percentage of middlings is much greater. This exceptional result is due to the special corrugations of the rolls, but during the last few months two well-known millers, whose mills have been altered at our suggestion, have expressed their greatest satisfaction at the change and state that the results obtained were infinitely superior to the old process. Of course there are factors in the case other than the mere change in the number of breaks. Well-constructed roller-mills, sharp rolls, ample roller surface, perfect parallelism and exact adjustments, and right shape and number of corrugation and skill in manipulating are equally necessary in the short as in the long system, but these are what we expect to find in every well-ordered mill. If these are present, then a four-break system, with the first break breaking so heavily that all the germ is released and eliminated by it, and none is left to go the second-break hopper, will give better results with less power than any six or seven break system we have ever seen.

EXPORTS OF WHEAT AND FLOUR.

THE exports of wheat and flour in wheat (reckoning 4½ bush. wheat to a barrel of flour) from all United States ports as reported by the Chief of the Bureau of Statistics of the Treasury Department monthly for four years were as follows:

Months.	1893.	1892.	1891.	1890.
January...	14,046,408	20,182,534	9,155,588	7,997,354
February..	13,248,860	15,255,824	7,791,615	9,376,763
March	13,618,827	15,625,652	10,596,208	10,077,654
April	12,210,494	14,365,146	10,872,949	9,913,515
May.....	14,343,490	16,142,082	10,240,119	8,884,636
June.....		14,928,274	10,422,770	6,857.143
July		13,720,154	13,694,899	7,892,532
August		19,533,231	26,269,582	9,428,115
September.		17,966,491	25,797,085	5,418,085
October...		20,687,559	10,610,046	7,571,682
November.		17,847,112	20,705,320	7,177,941
December.		17,423,590	23,089,368	9,613,712

STRENGTH OF SHAFTING.

IT is generally pretty well known that a shaft will transmit power in proportion to its running velocity, and, therefore, the faster a shaft runs the lighter it should be within reasonable limit. The use of extremely heavy shafting is not advisable under any circumstances unless actually needed to perform the work required. That there should be an ample margin of strength no one will deny, but shafting multiplies in strength so rapidly as sizes increase, that the unenlightened are apt to make the selections much too large when aiming at only strength margin. To show how easily uninformed mechanics may make mistakes of that kind, it is only necessary to say that a three-inch shaft has nearly three and one-half times the transmitting strength of a two-inch shaft. None unaware of the fact would ever guess at that difference and may fall into the error of selecting a three-inch shaft to safely do the work of a two-inch.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

HELPING NEW MARKETS.

A VIGOROUS effort is being put forth in Halifax to extend the trade of Canada with the West Indies and South America, and a joint stock association is to be organized to effect this purpose. Messrs. Spun, of Halifax, and McKay, of Demerara, are moving actively in the matter. They claim, and Mr. McKay speaks from eleven years knowledge of these markets, that Canada is the natural source of supplies for these countries. There was a large trade to be developed in Canadian products, flour and other products of the mill being the more important. There was a large consumption of bread and biscuit amounting annually to 6,000,000 pounds. This trade was at present largely controlled by the United States, who dealt with the Indies in other articles. The plan of the proposed association would be to divert this trade into Canadian channels. Men of responsibility would canvass the trade, working up profitable business connections, receiving their pay on a commission basis. These agents would also solicit and secure return consignments of the various products of those countries, largely consumed in Canada and largely imported indirectly. The suggestion is to divide the stock of the proposed company as follows: $25,000 for Nova Scotia, $25,000 for New Brunswick and Prince Edward Island, and the remaining $50,000 between Ontario and Quebec. This would prevent any one province having a controlling interest in the stock.

CONFERENCE ON UNDER-BILLING.

The deputation of President McLaughlin and associates, of the Dominion Millers' Association, who held a conference with the managers of the G.T.R. and C.P.R. at Montreal on the 24th ult., re the question of under-billing of grain and flour shipped on cars, were given every assurance of the co-operation of the railway companies to put a stop to this practice. Mr. McLaughlin suggested that if, whenever a greater weight was found in a car than marked on the shipping bill the surplus be charged at full local part car-load rates, it would have a salutary effect. Also, that legislation should be sought by the railroads which would make under-billing a criminal offence, and make not only the shipper and receiver but also the railway agent, if privy thereto, subject to heavy penalties. Mr. Seargeant sympathized with the millers, and would join with them heartily in every possible way to suppress this crying evil. The Grand Trunk had weighing scales at 36 points, and by increasing the billing to the correct weight had succeeded in increasing their receipts from this source alone about $100,000 a year, and still the rascally practice of "under-billing" was not extinguished. Indeed some of their customers had kicked, and said if they did not stop weighing their cars they would cease shipping by them. In the States this evil had grown to such an extent that under the "Interstate law" "under-billing" had been made a criminal offence punishable by imprisonment for two years and a minimum fine of $3,000. The railroad would be glad to assist in getting similar legislation passed next session, and would assist the Dominion Millers' Association in enforcing the railway act in seeing that equal privileges were given to all. Mr. Shaughnessey, of the C.P.R., said that his company had been seriously defrauded by this practice. Some of the cars originating at G.T.R. as well as C.P.R. points had been under-billed to the extent of 200 bags or 200,000 lbs., which meant not only a loss of about $50 a car in freight, but what was much more serious the grave probability of the car breaking down owing to overloading, and perhaps wrecking a train and thereby causing damage and perhaps loss of life. He would assist with all his influence in obtaining legislation to make under-billing a criminal offence, both for agents and shippers, and would join with the Grand Trunk in a joint circular to agents, and charge double rates or local part carload rates on all overplus. Both general managers agreed from this time forward to notify the secretary of the Dominion Millers' Association of all cases of under-billing of flour, grain, etc., giving full details of the same, with the names of the shippers and receivers.

CURRENT COMMENT.

The Miller, of London, Eng., says: "That the sellers of American patents have had uphill work during the past three months is perhaps the loudest echo of Mark Lane market. The pecuniary embarassments of certain firms have led to the forced sale of a good deal of imported flour, and although perhaps low grade has made up the largest item in this bill, yet no inconsiderable amount of excellent patent flour was thrown on the market and bought at very low figures. A case in point is the purchase of 1,000 sacks of a well-known patent at 23s. a sack. That price was secured by a factor, who, having a sound circle of custom among metropolitan bakers, could turn his purchase to good account by competing with higher-priced brands, of which the quality was little, if at all better."

A sign of the times, which will not be relished by English millers, says the Mark Lane Express, is the establishment of a "forward" market for American flour. The London produce exchange, from and after June 1, has established a basis type, which is called "American bakers' flour." The weight is 280 pounds, or a full sack, and the competition is with Norfolk and other sorts of English country flour. The opening prices are 17s. 3d. per sack for delivery at a later date, up to the end of October, does not look like much practical belief in scarcity as a result of the short American crop of the present year."

A DISTINGUISHED VISITOR.

The coming visit to Canada of Professor William Jago, an English baking engineer and chemist of international repute and an accomplished lecturer, is an event of no uncommon interest to Canadian millers.

Professor Jago is honorary chemist to the National Association of British Master Bakers and Confectioners, and his purpose in coming to America is to bring the actual producers and consumers of flour in more direct touch with each other. For this purpose each mill visited will be dealt with in a special paragraph of the report and the following particulars will be given:

1. Name and location of the mill.
2. Varieties of wheat used and district from which obtained.
3. Varieties of flour produced, names of brands under which sold, list of British factors importing and handling same.
4. Route of transport to Great Britain, and average time occupied in carriage from mill to British port.
5. Properties of flour as claimed by the miller.
6. Results of analysis of the flours. These will include reports as to color, strength, (quantity and quality of gluten), and water-absorbing power.
7. Baking tests. These will be specially adapted to the proposed uses of the flours. Speaking generally, the report will give particulars as to water taken by each flour, weight of fermented dough produced, and yield in bread. The character of the dough will be described; also that of the baked loaf, including color, flavor, volume, pile and bloom of crust.

Biscuit, cake and pastry flours will be subjected to special baking tests.

For inclusion in this report, a fee will be charged to each separate mill, depending somewhat on its actual location. This fee will cover the analysis and reporting on two samples of flour. Additional flours will be included at a fixed charge per extra sample. The fee is payable at the time of visit being made and samples taken.

The samples, weighing 14 pounds each, will be taken and sealed personally, and must then be delivered, carriage paid, to port of embarkation for America.

A complete copy of the report will be forwarded to each subscriber to same.

Under no circumstances will any mill, or series of flours, receive preferential treatment in this report. It is proposed to classify the results into natural geographical districts, arranging all mills in purely alphabetical order. Nothing in the nature of a trade puff will be inserted, but the report will be so couched as, so far as possible, to be of genuine service to the producers and handlers of all flours included in same.

Any step taken that will give British consumers a more perfect knowledge of the real nature of the flours turned out from our Canadian mills will certainly work for the gain of the Canadian miller. He need have no fear of the severity of the test or the character of the competition. The Canadian miller knows how to make first-class flour.

Professor Jago is expected to sail from England so as to reach Montreal about the 20th inst., and millers who desire to place themselves in communication with him will address: Wm. Jago, care of Messrs. H. & R. Allen, Montreal, Que.

THE FLOUR MARKET.

There is hardly any possibility of giving variety to the flour market of late. The story is one of continued dullness. Not a few of the mills in Ontario are running on short time, the demand for either export or local consumption being small. Prices show very little alteration.

PRICES OF FLOUR AND MEALS.

Toronto: Car prices are: Flour (Toronto freights), Manitoba patents, $4 to $4.10; Manitoba strong bakers', $3.70 to $3.80; Ontario patents, $3.50 to $3.70; straight roller, $2.85 to $3.10; extra, $2.65 to $2.70; low grades, per bag, $1 to $1.25. Bran, $11 to $12. Shorts, $13 to $15.

Montreal: Flour: Straight rollers have been offered at $3.15 to $3.25 and extras at $2.90 to $3.05. We quote: Spring patent, $4.10 to $4.15; winter patent, $3.90 to $4.10; Straight roller, $3.10 to $3.25; Extra, $2.90 to $3.05; Superfine, $2.60 to $2.90; City Strong Bakers', $3.80 to $3.90; Manitoba Bakers', $3.65 to $3.80. Meal and Feed: Oatmeal quiet but steady and stocks small. Standard in bags, $2.10 to $2.15 and in barrels $2.30 to $2.35; granulated $2.15 and $2.35 respectively. Rolled oats, bags, $2.15; brls., $2.25. Good demand for feed and shorts scarce. Bran $13 to $14; shorts, $17 to $18 and mouille $20 to $23.

Manitoba: No change to be noted. Patents, $1.90; strong bakers', $1.70; XXXX, 80c. to 95c.; superfine, 60 to 70c. Oatmeal, etc., Irregular in price. Rolled oats, $2.10 to $2.30 per sack. Granulated varies from $2.10 to $2.30; standard, $1.90 to $1.95; cornmeal, $1.60 to $1.65; beans, $1.80 to $1.90 per bushel; split peas, $2.40 to $2.50; pot barley, $2.50; pearl barley, $4 per sack.

CHANGE IN OWNERSHIP.

SOME time ago there was a rumour that the milling business of Mr. W. B. McAllister in Pembroke, and W. B. McAllister & Son, Pakenham, were to be converted into a joint-stock company, but this is not to take place, as Mr. C. B. McAllister has bought out his father's interest in the Pakenham mill, and the business of the mills at Pembroke and Pakenham will be conducted under the firm name of W. B. McAllister & Son. Mr. Charles B. McAllister will take sole management, with head office at Pembroke, and Mr. D. H. McAllister takes charge of the office at Pakenham. The firm will open an office and salesroom in Montreal, with Mr. J. DeWitt as agent and manager. This gentleman has had considerable experience in the flour milling business, having been seventeen years managing salesman for W. W. Ogilvie, Montreal, and as evidence of his faith in the new firm he has invested quite a sum of money in it.

WHEAT GROWING IN INDIA.

THERE are those who pretend to despise the importance of India as a wheat growing country, but in the opinion of Wilder Grahame, who contributes a paper on the subject to the Northwestern Miller, India is to be ranked as a formidable competitor in the wheat-growing industry, and a competitor which will become more formidable in the course of time, by the introduction of modern machinery and modern commercial facilities.

The area of the country is large, the regions most suitable for wheat covering an area of 100,000 square miles. The climate is very favorable. Two grain crops can be grown each year; the first grain season beginning about the middle of June, with the harvest in September and October. Another crop can be immediately sown which is ready to cut in March and April. The dry season follows the second harvest in March and April, during which garden stuff is grown to some extent.

Implements of cultivation are very inferior. The plow is a primitive wooden affair, which simply roots up the ground. and does not turn the soil. The plow costs about forty cents, and a complete outfit for plowing, including a yoke of cattle, plows and fastenings, is worth about $8.50 in India. The Indian oxen are said to be about one-third to one-half the size of our cattle. After plowing, a log or slab of wood is dragged sideways across the field to crush the lumps and smooth the surface. Seeding is done by hand, either sprinkled along the rows after the final plowing, or introduced into the furrow through a hollow bamboo rod fastened to the plow. From 100 to 150 lbs. per acre are sown. In some sections the wheat is carefully weeded, and the weeds utilized as food for both the people and cattle. Irrigation has to be resorted to nearly everywhere, three times being perhaps, the average number of floodings for each crop. The methods employed vary considerably with different localities, but the process is usually accomplished at a cost not exceeding $2.25 per acre.

About five months from the time of seeding, the grain is ready for the reaper. The reaper is a blade of iron six inches long, one inch wide, and curved like an old-fashioned sickle. The straw is cut handful by handful, and laid aside by the harvester, who sits upon his heels and moves himself forward by a peculiar waddle, quite comical to the observer. About one-twelfth of an acre per day is his stint, for which he receives 5c. without board. A binder follows this primitive reaper and gathers the grain into sheaves, much like our own. These are shocked and are allowed to stand a day or two before they are carted to the threshing floor.

Perhaps, says the writer, at no stage of the entire process is there a greater difference in the procedure between the wheat grower of America and India than in the threshing. In the centre of a bit of hard ground a stake is driven, around which is piled the grain. A rope attaches the stake to the horns of the cattle, which are then driven around until the straw is trampled fine, into what is termed "bhoosa," which is the principle food for the cattle. To any other process the natives vigorously object, claiming that the straw must not only be cut but flattened, just as this method does it (which our machinery will not do), to get the greatest food value from it. There is too much force in this objection to be easily overcome, and it is not probable that threshing machines will be successfully introduced until some such devices as the silo have been firmly and widely established.

After the tramping process is completed, the "bhoosa" is winnowed, by allowing it to drop from a sort of basket scoop before the wind. This separates the chaff from the grain. The former is gathered into bins and fed out very carefully; the latter either placed at once upon the market or buried in a hole to await higher prices. Very little of the wheat is eaten by the people themselves, as it is too expensive for ordinary use. The weeds and coarser grains furnish the natives with life, leaving it for the wheat to furnish him with money or the necessities that must be purchased.

The cost of raising an acre of wheat is put at the following:

Rent per acre	$ 3 60
Cartage of manure	1 20
150 pounds of seed	1 65
Plowing twenty times	75
Sowing by hand	15
Watering three times	2 25
Reaping and carrying	60
Threshing	35
Winnowing	07
Total	$10 62

On good irrigated land the average yield is 17 bushels per acre, and 10 or 11 on dry lands, which, however, may be had for much less rents. The average price is 68c., which brings the returns from the acre of wheat to $11.56 and the straw to $3, or $14.56 in all. This leaves a profit of $3.94 per acre. The expense, however, as estimated, includes the work of the farmer himself.

A large proportion of wheat raised is thrown upon the foreign markets, where it comes into competition with our own, for the average native is too poor to use it himself, except as an occasional luxury. Not so very long ago, however, he could not afford to send it away, on account of the high freight rates, consequently what little was raised was used for local consumption, or, rather, no more could be raised than could be disposed of locally. At that time an ox cart would haul 2,400 pounds, or 40 bushels, 12 miles, or one day's drive, for 40 cents—1 cent per bushel. From Cawnpoor to Calcutta is 684 miles, and the transportation alone made the wheat worth 57 cents per bushel at the latter place.

The introduction of the railway into India has changed all this, and made the price of wheat depend upon the price in foreign markets.

BRITISH IMPORTATION OF WHEAT AND FLOUR.

FOLLOWING is a table showing the importations of wheat grain and flour into Great Britain during April for three years, and during the first three months of each of the same years, together with the sources of supply:

	Month of April.		
WHEAT.	1891. cwts.	1892. cwts.	1893. cwts.
From Russia	2,314,902	10	518,950
" Germany	94,888	11,746	48,098
" France	11,682	3,205	2
" Turkey	80,065	66,135	5,782
" Roumania	32,011	53,032	....
" Egypt	22,374	104,514	....
" United States:			
On the Atlantic	645,951	1,228,763	1,199,544
" Pacific	1,055,998	629,007	968,589
" Chili	48,958	261,351	65,519
" Argentine Republic	489,899	297,141	256,325
" British East Indies	546,490	779,287	152,738
" Australasia	210,252	64,922	175,729
" British North America	....	6,200	14,510
" Other Countries	1,333	81,448	10,173
Total	5,564,303	3,586,761	3,415,959
WHEAT MEAL AND FLOUR.			
From Germany	50,710	7,728	7,403
" France	5,932	2,408	5,674
" Austrian Territories	141,527	81,657	110,243
" United States	1,534,275	1,609,924	1,869,656
" British North America	610	....	2,800
" Other Countries	93,986	20,094	5,933
Total	1,827,040	1,721,811	2,001,709

	Three Months Ended April.		
WHEAT.	1891. cwts.	1892. cwts.	1893. cwts.
From Russia	4,874,976	85,852	2,147,122
" Germany	416,436	50,006	149,835
" France	14,283	3,315	32
" Turkey	302,830	288,907	51,971
" Roumania	168,095	79,025	48,028
" Egypt	139,500	284,715	....
" United States:			
On the Atlantic	1,870,363	6,563,777	6,790,721
" Pacific	2,580,865	2,171,245	4,313,227
" Chili	48,958	647,296	186,636
" Argentine Republic	958,094	476,849	500,609
" British East Indies	2,957,151	4,050,366	854,043
" Australasia	483,367	178,791	241,450
" British North America	56,692	54,884	23,372
" Other Countries	93,574	164,386	30,979
Total	14,965,184	15,099,444	15,368,025
WHEAT MEAL AND FLOUR.			
From Germany	160,100	19,127	34,358
" France	23,942	9,360	16,598
" Austrian Territories	588,965	356,153	362,334
" United States	5,211,475	7,220,848	5,024,793
" British North America	20,997	750	5,214
" Other Countries	155,788	42,227	8,824
Total	6,111,267	7,648,735	6,452,121

TELEPHONING OVER TELEGRAPH WIRES.

AN apparatus has been constructed for telephoning simultaneously over telegraph wires. The system has been in operation for some time on the telephone line from Budapest to Szegedin, a distance of 121 miles. The results were satisfactory. The apparatus can easily be inserted in a telegraph circuit and used at once. It is said that simultaneous telegraphy along the wire does not in the least interfere with telephoning, and that the effects of induction and all disturbing noises are completely removed.

Office of the CANADIAN MILLER,
July 15, 1893.

THE GENERAL SURVEY.

A SLUMP of over two cents a bushel in the price of wheat on the last day of June made matters lively on the Chicago market and added interest to the markets generally. No. 2 wheat for July delivery touched 61⅛c. the lowest figure yet recorded. The cause of the slump was attributed to Beerbohm saying that five districts of India raised 56,000,000 bushels more wheat than last year. With others the change was credited to the silver news from India. The truth is that financial affairs in the States at the present time are rocky enough to take away the newness of any surprise. The remark of an old operator that "Americans are completely cleaned out of money" is probably nearest the mark.

The New York Sun has been making a careful investigation into the cause of decline in wheat prices, and expresses the view that the present abnormally low price is due mainly to financial stringency, which forces borrowers who hold wheat to sell. There is also a surplus of about ninety million bushels from last year's American harvest, and the crop will be in in a few months. But there has also been a steady decline during the last decade, for the reason that the cost of production and transportation has fallen. In 1882 and 1883 the average price of wheat in New York was $1.28; in 1886, 89 cents; in 1887 90 cents; in 1890, 97 cents; in 1891, when European harvests failed, $1.08. Last year's quotations began at $1.05½, closed at 78¼c. and averaged 90c. for the twelve months.

Railroad building, says the Sun, has opened up immense stretches of new wheat lands, especially in the Northwest, where the length of the summer day more than compensates for the shortness of the season, and where Scotch Fife, Blue Stem and other sterling varieties thrive. Great improvements have been made in farm machinery. Gangs of four ploughs are not uncommon on prairie farms. Sowing and reaping are carried on with great rapidity. Farm machinery has fallen in price. A farmer in Minnesota or Dakota can buy a plough, a tedder, a rake, a seeder, a harvester and self-binder for from $350 to $400, according to size, quality and distance from the railroad. If his farm is not large enough to warrant his getting a thresher and cleaner of his own, he can join a club and share with his neighbors in the use of a machine easily despatching two bushels a minute. Another cause of cheapness which The Sun notes is the advance of agricultural science, tending to make the crop more easily raised and more bountiful.

These views were voiced in an interview with a prominent miller and grain merchant of western Ontario in the MILLER columns a few months ago.

Reports of the coming harvest have changed little since our last writing. On the whole both on this continent and in Europe there has been improvement.

THE NORTHEY MANUFACTURING CO.'S NEW PREMISES.

The Northey M'f'g. Co., of this city, manufacturers of pumping machinery, have just completed and equipped a new factory at the King street subway. A representative of THE MILLER recently paid a visit to the new works, and was taken in hand and escorted through the premises by the courteous secretary-treasurer of the company, Mr. J. E. Pell.

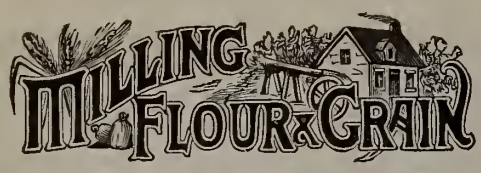
The main building is laid out on the most approved modern lines, and divided into three wide bays of about 30 feet each. This building is 250 feet long, and the pattern shops, brass foundry, boiler house, pattern storage, offices and subsidiary buildings are on a proportionate scale. The side bays are to be used for the small tools, and the centre bay for the heavier tools, erecting, testing, etc.

This division is equipped with surface and overhead transportation machinery of the latest and best description, working in connection with private switches from the Canadian Pacific and Grand Trunk railways. The handling and shipping facilities are thus most complete.

The tool equipment includes the best special modern machines for single and duplex pump manufacture, turning and boring machines, gang milling machines, screw and turrett machines, etc,

Fuel gas is used for boiler firing, heating of factory, forges and brass melting pots; electricity for lighting factory and working travelling crane.

This is by far the best equipped and largest hydraulic works in Canada, and turns out work which commands a large and increasing sale.



CANADA.

—White's mill at Pilot Mound, Man., is doing a good custom trade in flour.

—The Mossomin Elevator company, limited, Man., has been sold out by the sheriff.

—W. L. Griffith's elevator at Emerson, Man., was, on the 2nd inst., totally destroyed by fire with 20,000 bushels of wheat.

—The steamer Sitka, which struck the Canoe rocks, near Pt. Arthur, Ont., suffered damage to about 10,000 bushels of wheat.

—The by-law granting $3,000 to aid in the erection of a flour mill at Prince Albert, Saskatchewan territory, has been carried.

—Wm. & J. G. Greey, mill builders, Toronto, are building a 75-barrel flour mill at Steinback, Man., for Reimar, Barkman & Co.

—Robin, Atkinson, Clarke, Crowe, Rawlf and Mitchell desire incorporation as the Northern Elevator company, with headquarters at Winnipeg, and capital of $250,000.

—The grist mill at Kintore, Ont., which has been idle for some time, has been purchased by Mr. Cawthorp. It is to be removed to Thamesford, and used as a storehouse for flour, wheat and other grains.

—Phillips & Richardson, of Portage la Prairie, Man., intend commencing building operations on their elevator this month, and with 100,000 bushels of wheat in view, Lumsden will be one of the best wheat markets in the Territories.

—Walker and Carson propose erecting a flour and oatmeal mill at Carman, Man., with a capacity of 200 barrels of flour and 75 of oatmeal. They ask a bonus of $7,000 and a municipal by-law will probably be submitted upon the bonus question.

—The Ogilvie Milling Company's cash prize of $125, offered for the best twenty-five bushels of Red Fyfe wheat shown at the Winnipeg Industrial Exhibition is to be open for competition to the Territories as well as Manitoba this year.

—Grubs are reported to be doing considerable damage to wheat in some parts of Manitoba. The big plain north of Carberry has had several fields destroyed. The damage is mostly confined to summer fallows, that were allowed to grow up in woods and so furnish a resting place for the larvae.

—Dow & Curry, of Pilot Mound, Man., have purchased the mill and engine at Clearwater and they will move it from there to Pilot Mound where it will be used in the construction of their oatmeal and barley mill. They expect to begin work upon the building immediately. Mr. Dow is a miller of large experience.

—Forwarding companies were never kept as busy handling grain on the St. Lawrence as this season. Since April the Kingston & Montreal Forwarding Company has received 1,672,000 bushels and handled at Ogdensburg 500,000 bushels additional. As much grain has been received up to the present as was handled in the whole season before.

—J. McLaren & Co., Wakefield, Que., are having a survey made with a view to having a branch from the main line of the G.T.R. run up to their mills where they intend building a large grain elevator. It is learned also that this firm, in the near future, intend to put in an electric plant for lighting their own flour mill, woollen factory, store and offices.

—The machine, wood-working, and tin shops, comprising the principal building of the North American Mill Building Company's works, were destroyed by fire on Monday, 3rd inst. When first observed, between nine and ten o'clock, the fire was confined to a few square inches on the roof, having evidently caught from a spark. The fire company attached to the works were quickly on hand, but owing to the bursting of a hydrant were unable to reach the spot with water, and in a short time the whole building was a roaring furnace of flames. When water was obtainable efforts were directed towards saving the adjoining buildings, with success. The building contained a large quantity of machinery in course of construction necessary to the filling of several contracts which the company have on hand. The loss on buildings and stock is estimated at $30,000. The insurance companies interested are London and Lancashire, Royal, Western, Perth Mutual, Etna, London and Liverpool and Globe, and Phenix.

FOREIGN LETTER BOX.

RUSSIA.

THIS year's grain in Russia will be conspicuous for big kernels and high natural weight. Crops in the south are looking well.

BUDAPEST.

Flour is very stagnant. Little is moving for either home or export trades and stocks are more than sufficient to meet all needs. Crop prospects have improved some during the month with weather more favorable. Spring wheat presents a poor showing. The Pester Lloyd, under date of June 22, says that recent rains have improved the Hungarian wheat 50 to 75 per cent. Rye has fully recovered, and potatoes are in excellent condition. The meadows are improving so rapidly as to remove all anxiety on the part of the farmers.

GREAT BRITAIN.

At London, Liverpool and Glasgow the flour market is very depressed, and buyers are teetotal abstainers—in buying. Ocean rates are still higher than they were a week ago, this being particularly applicable to London, and, in nearly as great a degree to Liverpool. Glasgow has changed little. Other ports have also been subject to higher rates, notably Antwerp and Leith. This has surprised local shippers, and they are unwilling to believe that present rates will be long-lived. The only apparent cause for the heavy advance is the increased amount of grain being exported.

MINNEAPOLIS.

We have been writing of dullness in the flour market for some time past and it cannot be said that any improvement has taken place within the past month. The output of the mills is variable, but on the light side. The Northwestern Miller says: "Domestic trade is light at the best, and consists, virtually, of small orders from old customers. Prices, while not apparently lower, are rather weaker. Foreigners are fairly good bidders. They seek flour for future shipment, and stand ready to buy, at present prices, for as late shipment as October. Millers, however, figure that it costs 7c. per barrel per month to carry flour, and not very many are found that are willing to sell ahead so far. Some millers continue to find the export trade better than the domestic, while others report business about as good from one quarter as the other. More or less low grade has lately been sold here for exportation to Holland, and at fairly satisfactory prices. Considerable inquiry has been made for bran, but millers, as a rule, are unwilling to bother with this sort of business, as deals in the past have not proven satisfactory."

PERSONAL.

Mr. M. F. Rice, who has been second miller at the Ogilvie mill at Winnipeg, Man., has been removed to Montreal, where he takes the position of head miller in one of the Ogilvie mills there.

Mr. James Hargreaves, who left Minneapolis a short time since to run one of the Ogilvie mills at Montreal, has returned to Minneapolis, where he has taken a position in the Standard mill.

Mr. G. A. Thomson, of Montreal, has been spending a fortnight in Duluth looking after grain interests and shipping grain to Montreal.

Mr. W. B. McAllister, who has recently retired from the milling business in Pembroke, Ont., intends devoting his energies towards developing his mining properties in Hastings and Frontenac. As noted in our news columns, the milling business has been purchased by Mr. McAllister's sons.

Mr. J. C. Leslie, of Toronto, who died at the age of 90 years a fortnight ago, was one of the oldest traders in Canada, having been in business for nearly 70 years. He opened the first flour and feed store west of Kingston and was a pioneer in the nursery plantation business.

NEWS AND NOTES.

The flour mill at Kincardine, Ont., has been purchased by R. M. Watson, and put in first-class working order.

An elevator, unoccupied, on Canal St., Montreal, Que., was destroyed by fire on the 7th inst. Loss, $30,000.

The municipality of Wawanesa, Man., offer a liberal cash bonus and other inducements to a practical man who will operate a grist mill in that locality. Particulars are furnished in our advertising pages.

The News, Truro, N.S.: The CANADIAN MILLER, Toronto, is right up to the times in all matters pertaining to the milling industry.

STEAM PUMPS

NORTHEY M.F.G.CO.LTD
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If you require a pump for any duty, of the latest and most improved pattern, and at close prices,

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COOPERAGE.

There is a close affinity between the work of the cooper and the business of milling. The miller is either his own cooper, having a cooperage as an adjunct to his mill, or else he rests for his supplies on an outside cooperage. The cooper in any case finds one of his best customers in the miller. The object of this department is to bring each in close touch with the other and to materially advance the interests of both trades.

THE MONTH'S TRADE.

WE are pleased to say that since our last report the cooperage business all over the country has materially improved, the mills are running much heavier than they have been doing for some time and coopers are beginning to make apple barrels for the fall. Up to the present, prices have not been affected, and we do not expect they will go higher at present, as there are ample stocks of staves, hoops and heading on hand at the different factories to be able to meet any demand.

Some of the millers have shown an inclination lately to make their barrels with half round hickory round hoops, the same as are used very extensively in Minneapolis. Others are going into using the patent wired hoop, as used by an English syndicate in Minneapolis on their barrels; this hoop is the ordinary patent elm hoop, with a groove running down the centre in which is inserted a coppered steel wire. The hoops are colored for ornamental purposes, and a very pretty barrel is the result. The great strength of the wire prevents the hoop from breaking or coming off even when broken, and when kiln dried stock is used with these hoops, such a thing as leakage of flour is never heard of.

COOPER'S CHIPS.

James Innes, of Sutherland, Innes & Co., Chatham, Ont., when in Minneapolis a few weeks since, said to a reporter that while barrel stock is not in very brisk demand, his firm is doing considerable business in the east, and particularly at Buffalo. The apple crop, both in the United States and Canada, is of the most promising sort, and No. 2 stock will be required in large amounts from that quarter. For No. 1 elm staves, $6.75, delivered at Minneapolis, is as low as manufacturers can afford to sell. While at Minneapolis he closed a contract with L. Christian & Co., for 20 cars of elm staves.

Letters patent have been issued incorporating the Bain Waggon Company (Ltd.), Woodstock, Ont., capital $100,000. This company, besides the ordinary waggon business, will acquire and hold the necessary real and personal property, including the business heretofore carried on at the said Town of Woodstock, by James Hay, the Elder, and James Hay, the Younger, also The Chatham Wired Hoop Company, Ltd., capital $50,000, to manufacture and sell coopers' supplies and materials, etc.

During the last month, the new stave and heading mill of Schliehauf Bros., at Bismark, was burned down, the heading kiln containing heading boards was also burned. It is the intention of Messrs. Schliehauff Bros. to rebuild just as soon as possible, and have the mill in operation inside of a month.

June Stiles, miller, of Flint, Mich., had his arm broken in eight pieces.

PUBLICATIONS.

The fact, that "The Present Position of Roller Flour Milling" by Henry Simon, M. Inst., C. E., of Manchester, Eng., is written by one of the largest mill furnishers in Great Britain does not detract from the sterling merits of the book. The author has undoubtedly every faith in the Simon system of flour milling and the work before us is illustrated with a map of the world showing the developments of the Simon roller system, together with plates of typical mills and illustrations of the machinery used therein. But the merit of the book is in the historical account that is given of the development of flour milling and the various progressive steps taken in this development. As a practical mechanic and a master of the science of mill-building, Mr. Simon discusses with great clearness many matters of detail touching the engine room, and departments of the mill where the machinery is located. The volume is 9 x 11 inches, bound in cloth, gilt edge, faultlessly printed, on finely finished heavy paper, embracing about 100 pages.

"Ontario's Parliament Buildings, 1792 to 1892," by Frank Yeigh, private secretary to the Commissioner of Crown Lands, is a book that will take prominent rank among the historical works of the Dominion. It was an opportune time, just on the completion of the magnificent pile in the Queen's Park, in which all Ontarioans, and indeed Canadians from whatever province, have much pride, to take a retrospect of provincial legislation for the past century. Mr. Yeigh has shown large industry in the collection of historical incidents and facts related to the subject matter of the book and has compressed into this one volume a mass of data that will be new to not a few Canadians, who doubtless consider themselves well-read on the affairs of their country. To the general reader the information will be, in no small measure, entirely new, and to everyone it must be very valuable. The book is written in an easy, sketchy style, that marks whatever comes from Mr. Yeigh's pen, and contains many illustrations of prominent legislators and of different places of meeting of the legislature during the past hundred years. Bound in cloth and well printed. The Williamson Book Company, publishers, Toronto.

ANNUAL MEETING DOMINION MILLERS' ASSOCIATION.

THE order of proceedings at the annual meeting of the Dominion Millers' Association to be held in the Board of Trade building, August 9th and 10th next, will be of a most interesting character. The programme has not been completed at the time the CANADIAN MILLER goes to press for July, but enough is known to assure everyone of a gathering alike profitable and enjoyable. How can the acme of first-class flour-making be attained; where the best markets and how to further cultivate them; what can be done to protect the honest dealer against the rascals who insinuate themselves into business; the grain trade, its outlook, and its relations to successful milling—these are but suggestive of the class of subjects that will be discussed and of their importance to every miller. The social side of the miller will not be forgotten, and something specially attractive and unknown in connection with former meetings is being planned. Remember the dates, August 9th and 10th.

WHAT GIVES OUT.

THE arms of pulleys as they are usually constructed have but little to do with the centrifugal strain upon the rim, and, so far as observation may go, it is quite evident that when a pulley is thus broken the rim is the part that first gives, and but few cases have come under observation where it was otherwise.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 27th of each month to insure insertion in the following issue.

TO MILLERS AND GRAIN EXPORTERS.—Advertiser wishes to represent a good miller or grain merchant in the London market on commission; references exchanged. J. H. BAILEY, Sr., Brentford, London, England.

GRIST MILL FOR SALE

STONE PROCESS; DOING A FAIR BUSINESS; ample water power. Will be sold cheap. For particulars apply to

G. M. SHEPLEY,
Falkirk, Ont.

MACHINERY FOR SALE

FOR SALE, ONE DOUBLE SET OF ROLLS 7 x 14, one bedstone 4 ft. 4 in., Spinder oil pot lighter and driving irons, 14 ft. 2 in. of shafting' Address:

P. LOUCKS,
Flesherton, Ont.

FOR SALE

33 IN. GIANT WATER WHEEL, RUNS against the sun, has division plate; good as new; also lot of heavy iron spur and bevel gearing. Apply

TORONTO RUBBER CO.
OF CANADA, LTD.,
28 King Street W.

TO MILLERS

FOR SALE

"NATIONAL ROLLER MILLS," BRUSSELS, Ont.; capacity 100 barrels per day. Cheap, easy terms of payment. Address

"B.C.," P.O. Box 566, Toronto.

IMPORTANT TO MILLERS

LIBERAL CASH BONUS, FREE SITE, R.R. switch, etc., offered to a practical man who will erect and operate a grist and flouring mill at Wawanesa, Man.

Location one of the best in Manitoba.

Correspondence invited.

JOS. CORNELL,
Sec'y of Ratepayers' Committee.

AUCTION SALE

OF

VALUABLE MILL PROPERTY

UNDER A POWER OF SALE IN A MORTgage there will be sold at Martin's Hotel, Goderich, on

Tuesday, the 25th day of July, 1893

at 1.30 o'clock p.m., the Port Albert Mill Property, in the County of Huron.

There is a first-class Roller Flour Mill, Saw Mill, Stave Factory, and Cooperage; two Dwelling-Houses, Store, Stable and Driving-shed. The mill is driven by water-power, and its capacity is 75 barrels per 24 hours. The water-power is one of the best, being on the Nine Mile River.

Port Albert is situated on the east shore of Lake Huron, 7 miles from Dungannon and 10 miles from Goderich, the county town. A large amount of money is now being expended by the Dominion Government at Port Albert harbor.

For further particulars apply to the auctioneer, A. C. Hawkins, Esq., Port Albert, or the Vendors' Solicitors.

Dated 15th June, 1893.

CAMERON, HOLT & HOLMES,
Vendors' Solicitors, Goderich.

THOS. GRUNDY,
Auctioneer, Goderich.

SUBSCRIBE FOR ∴∴∴

Canada Lumberman

YOU'LL LIKE IT

ADDRESS: TORONTO

MILLERS' & MANUFACTURERS' INS. CO.

ESTABLISHED - 1885

32 Church Street, Toronto

The President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said: I have much pleasure in drawing your attention to the fact that this company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

Up to the present time the insurers with this company have made a saving, when compared with the current exacted rates, of $91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to $21,522.72.

Besides achieving such result, we now also have, over all liabilities—including a re-insurance reserved (based on the Government standard of 50 per cent.—(50%), a cash surplus of 1.93 per cent. to the amount of risk in force.

Such results emphasize more strongly than any words I could add the very gratifying position this company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report.

The report was adopted, and the retiring Directors unanimously re-elected. The Board of Directors is now constituted as follows: James Goldie, Guelph, president; W. H. Howland, Toronto, vice-president; H. N. Baird, Toronto; Wm. Bell, Guelph; Hugh McCulloch, Galt; S. Neelon, St. Catharines; George Pattinson, Preston; W. H. Story, Acton; J. L. Spink, Toronto; A. Watts, Brantford; W. Wilson, Toronto.

HUGH SCOTT, Mgr. and Sec'y. THOS. WALMSLEY, Treasurer.

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Entirely New. Abreast of the Times. A Grand Educator.

The successor of the "Unabridged."

Ten years were spent revising, 100 editors employed, and over $300,000 expended.

Everybody should own this Dictionary. It answers all questions concerning the history, spelling, pronunciation, and meaning of words.

A Library in Itself. It also gives the facts often wanted concerning eminent persons, ancient and modern; noted fictitious persons and places; the countries, cities, towns, and natural features of the globe; translation of foreign quotations, words, phrases, and proverbs; etc., etc., etc.

This Work is Invaluable in the household, and to the teacher, scholar, professional man, and self-educator.

The Globe, Toronto, says:—
This new dictionary is the best book of its kind in the English language. For every family, the members of which have mastered the art of reading, its purchase will prove a profitable investment.

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It may well be pronounced the best working dictionary and the cheapest book in the world, and should be in every school and family in Canada.

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G. & C. Merriam Co.
Publishers,
Springfield, Mass., U.S.A.

Do not buy cheap photographic reprints of ancient editions.

Send for free prospectus containing specimen pages, illustrations, etc.

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The Canadian Miller will not knowingly publish the cards of irresponsible parties. So far as we know, the following firms are thoroughly reliable.

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FLOUR and GRAIN

DEALER

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TORONTO

EASTERN AGENCY:

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G. K. MORROW, MANAGER.

C. GOODE

GRAIN and COMMISSION Merchant

ONTARIO AND MANITOBA WHEATS IN CAR LOTS

Consignments promptly attended to

62 FRONT STREET EAST

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FLOUR, GRAIN MILLFEED

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Send large samples and quote prices . . . .

MANITOBA WHEAT FOR SALE

Rooms 511 and 512 Board of Trade

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Peer & Company

Flour and Grain Merchants

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TORONTO

ESTABLISHED 1859

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STARK BROS. & CO.

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Specialties:

MANITOBA WHEAT

MILLFEED

AND COARSE GRAINS

LAWRENCE COFFEE THOMAS FLYNN

ESTABLISHED 1845

L. Coffee & Co.

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TORONTO

Cooperage Stock

If you want Staves, Hoops, Heading or Liners

For Flour Barrels, Meal Barrels, Apple Barrels, Salt Barrels, Bean Barrels ..... or any other kind of Barrels, write to .....

.... THEY MAKE THE BEST STOCK ....

SUTHERLAND, INNES & CO., CHATHAM, ONT.

"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE." —Longfellow.

DO YOU?

WISH THUS TO BUILD, an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

John J. Dixon & Co.

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Canada Life Assurance Building

Toronto

Orders executed on the New York Stock Exchange and Chicago Board of Trade.

Private wires direct to New York and Chicago.

TELEPHONE 2212

USE

MYERS' ROYAL CATTLE SPICE

TESTIMONIAL.

DEPARTMENT OF AGRICULTURE, ONTARIO, Toronto, March 17th, 1893.

Gentlemen,—We have used Myers' Royal Cattle Spice during the present winter with both cattle and sheep. It seems to be equally valuable for both. I noticed especially the benefit on a lot of yearling rams. The change in their appetite and appearance was easily perceived after the first week or ten days' feeding, and they have steadily and rapidly gained since.—Yours very truly, (Signed) JOHN DRYDEN.

Messrs. Myers & Co., Toronto.

DUST! DUST!

Gibbs' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust. Invaluable to operators in every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel plated protector by mail, $1.00; postage 5c. Circulars free. Agents wanted.

Gibbs' Respirator Co., 36 LaSalle St., Chicago.

EMBRO OATMEAL MILLS....

ROLLED OATS STANDARD

—AND—

GRANULATED OATMEAL

MADE FROM SELECTED WHITE OATS.

Special terms made with Flour Millers for re-shipment with carload flour.

D. R. ROSS EMBRO ONT.

FLOUR BARREL STOCK

...STAVES HEADING...

HOOPS

AYTON, ONT.

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RESULTS —COME FROM— ADVERTISING IN Canadian Miller WRITE FOR TERMS.....

BRANDS:

STAR : LINCOLN
CROWN
RED CROSS
CLYDE MILLS
SPARKLING RIVER

Unsurpassed for Uniform Quality

GREENFIELD MILLS ✠ AYR, ONT.

D. GOLDIE, Prop.

Daily Capacity 500 Barrels

JORDAN CHAMBERS

W. J. Kramer,

DESIGNER & ENGRAVER ON WOOD

TORONTO ONT

3½ Cents a day—

That isn't much money, is it?

About twenty-five cents a week or so.

And a man must be pretty hard up if he hasn't that much to spend every week.

Times are hard, they say; but if they are hard now to your family and yourself, what will they be to your family without you?

That's worth thinking about.

We think that no man should be without life insurance when it can be had at such a low rate as 3½ cents a day from the Manufacturers' Life, Yonge Street, corner Colborne, Toronto.

Write to us and we will give you all particulars.

ROBIN & SADLER

MANUFACTURERS OF

Leather Belting

SPECIALTIES

DYNAMO BELTS

WATERPROOF BELTING

MONTREAL TORONTO

2518 & 2520 NOTRE DAME ST. 129 BAY ST.

☞ Send for sample of our new SAWMILL BELT ☜

Royal Mills, capacity 1,800 bbls.
City Mills, 1,100 bbls
Glenora Mills, 1,200 bbls.
Goderich Mills, 1,200 bbls.
Seaforth Mills, 600 bbls.
Winnipeg Mills, 1,200 bbls.

DAILY CAPACITY

7,100 BBLS.

FIRST PRIZE, DIPLOMA AND GOLD MEDAL, EXHIBITION, JAMAICA : : : :

HIGHEST QUALITY

Hungarian Patents AND Strong Bakers'

FLOUR

W. W. OGILVIE

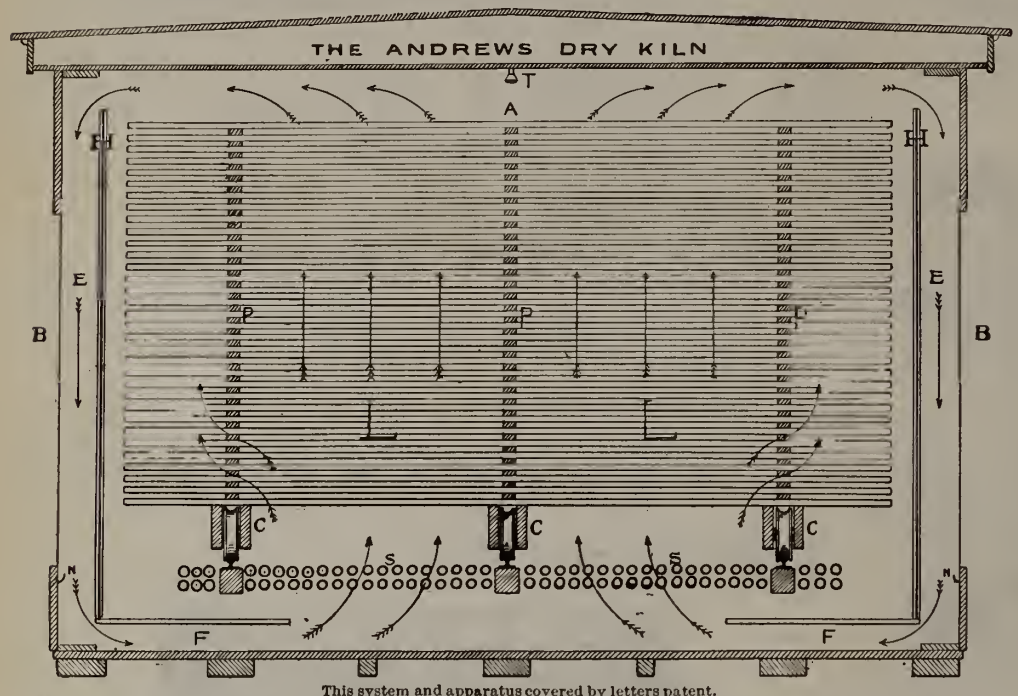
PROPRIETOR

HEAD OFFICE:

MONTREAL, QUE.

THE ANDREWS DRYER

For Lumber, Shingles, Staves, Heading, etc.



This system and apparatus covered by letters patent.

A—Drying-Room. **BB**—Brass Condensing-Walls. **CCC**—Lumber Cars. **EE**—Down Air-Flues. **FF**—Bottom Air-Flue. **HH**—Inside Walls, protecting metal from heat. **LL**—Lumber on cars. **NN**—Brass Gutters for receiving condensed moisture. **PPP**—Sticks between lumber. **SS**—Double Steam-Coils. **T**—Automatic Steam Fire-Extinguishers. Arrows show direction of currents of air.

THIS DRYER

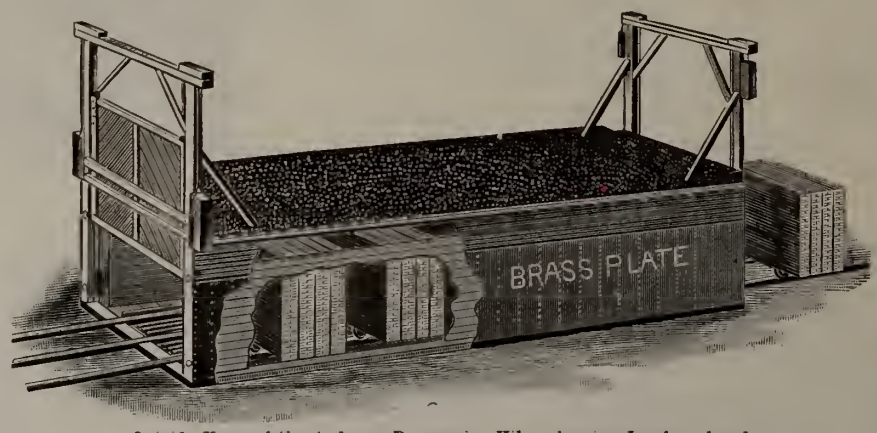
HAS PROVED TO PURCHASERS TO DO WHAT IS GUARANTEED IN SAVING THEM MONEY IN

Freight, Insurance, Time, Interest, Expense, Capital, Yard Room, Labor

There may be persons who do not appreciate the advantages of the artificial drying of lumber. But the shrewd men, in the manfacture of furniture and other woodwork where reputation would be sacrificed by a lack of proper m tterial for good gluing and finishing, recognize a good system of drying as an important element of their success. High scientific authorities and thoroughly practical men are now agreed that the hot-blast and rapid-current systems ARE WASTEFUL, and that steam heat is the only safe means for artificial drying. The mode of applying steam heat most efficiently and economically is therefore now the essential point. The Andrews Dryer accomplishes this result more surely than any other known system.

NO FAN
NO ENGINE
NO SMOKE
NO CHIMNEY
NO SPECIAL FIREMAN OR FUEL
NO EXPENSIVE BRICKWORK
NO RISK OF FIRE
NO CHECKING OR WARPING
NO CASE-HARDENING

. . . . **NO EQUAL** . . . .



Outside View of the Andrews Progressive Kiln, showing Lumber placed crosswise the building, on cars.

"WE PUT GREEN SPRUCE IN DRIPPING WITH WATER, AND IN EIGHTEEN HOURS IT WAS DRYER THAN LUMBER THAT HAD BEEN STUCK UP IN THE YARD ALL SUMMER."

This is the verdict of a Quebec lumber firm, and we can give equal results every time.

The Andrews Lumber Dryer

Has been proved to possess the following points of excellence:

1st. That its drying is rapid and perfect.

2nd. That external and internal checking and discoloration are entirely avoided by this method.

3rd. That the drying is done by a CONTINUOUS system and the temperature of the kiln is under absolute control at all times.

4th. That our Dryer is free from the varying air currents (always wasteful) incident to all fan and open-draft kilns.

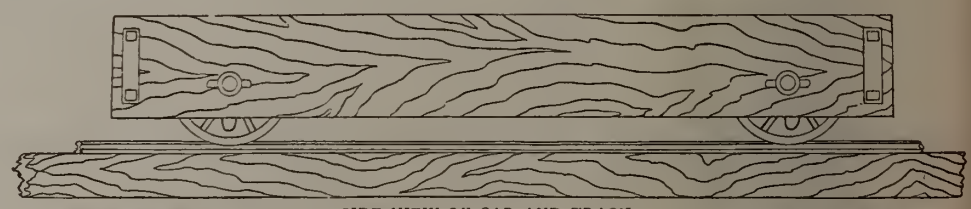
5th. That our drying is done by the slow continuous movement of a large body of slightly-moistened air.

6th. That our condensing surface is so very large as to be adequate to precipitating the moisture of the saturated air with the least amount of movement.

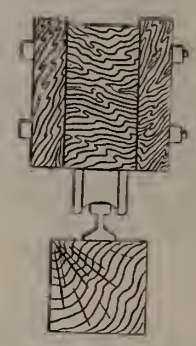
7th. That our piping is tested by high pressure and every outfit is fully guaranteed.

8th. That by our improved system of drainage the freezing of pipes becomes impossible.

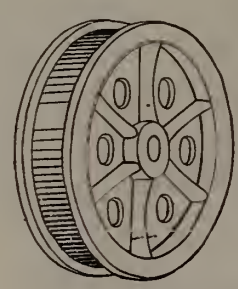
SEND FOR CIRCULARS



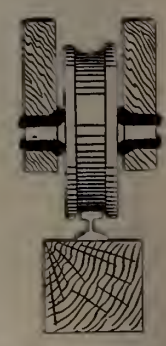
SIDE VIEW OF CAR AND TRACK.



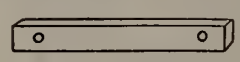
DOUBLE FLANGE WHEEL ON SINGLE TRACK



CAR WHEEL, DOUBLE FLANGE



SECTION OF CAR TRUCK, SHOWING AXLE BOX.



STRAP WASHER

BOLT

AXLE

DOMINION DRY KILN COMPANY

CANADA LIFE BUILDING : : : : TORONTO, ONT.

A POOR THING IS DEAR AT ANY PRICE

THAT IS WHY IT PAYS BEST TO PROCURE

... THE GENUINE ...

DUFOUR & CO'S BOLTING CLOTH

. . . IT IS THE BEST IN THE WORLD . . .

A large stock of all numbers in Heavy, Extra Heavy and Double Extra Heavy Qualities from 0000 to 16 always on hand.

Also Gritz Gauze from 16 to 72 mesh at lowest possible prices.

CLOTHS MADE TO ORDER TO FIT ANY SIZE REEL OR SIEVE ON SHORT NOTICE.

ALSO PLATED STEEL SCALPING AND BOLTING WIRE FROM 10 TO 100 MESH.

TEMPERED STEEL BRAN DUSTER WIRE FROM 36 TO 70 MESH.

SPECIAL WIRE FOR ALL PURPOSES:

Perforated Zinc, Leather, Rubber, Cotton and Link Chain Belting, Sprocket Wheels, Cockerell Steel Wire Scouring Cases for Wheat Cleaners, Elevator Buckets, Bolts, Caldwell Steel Conveyor, all sizes, Flour Triers, Grain Scoops, Dust Protectors, and a Host of other Articles and Supplies for Millers, all of the Very Best Quality at Reasonable Prices. Orders by mail receive ready attention and prompt despatch.

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WM. & J. G. GREEY,

2 CHURCH STREET . .
TORONTO, ONT.

Standard Curved Sieve

AND THE IMPROVED NEW ERA SCALPERS

2 SEIVE SCALPER.

ARE THE POPULAR MACHINES FOR HANDLING BREAK STOCK AND GRADING MIDDLINGS

3 SEIVE SCALPER AND GRADER.

IMPROVED NEW ERA SCALPER.

One 1 Sieve New Era will scalp the breaks in a small mill . .

One 2 Sieve Standard Machine will scalp the breaks and grade the coarse middlings in a small mill . . . . . .

One 3 Sieve Standard Machine will scalp the breaks and make two grades of middlings . . . . . .

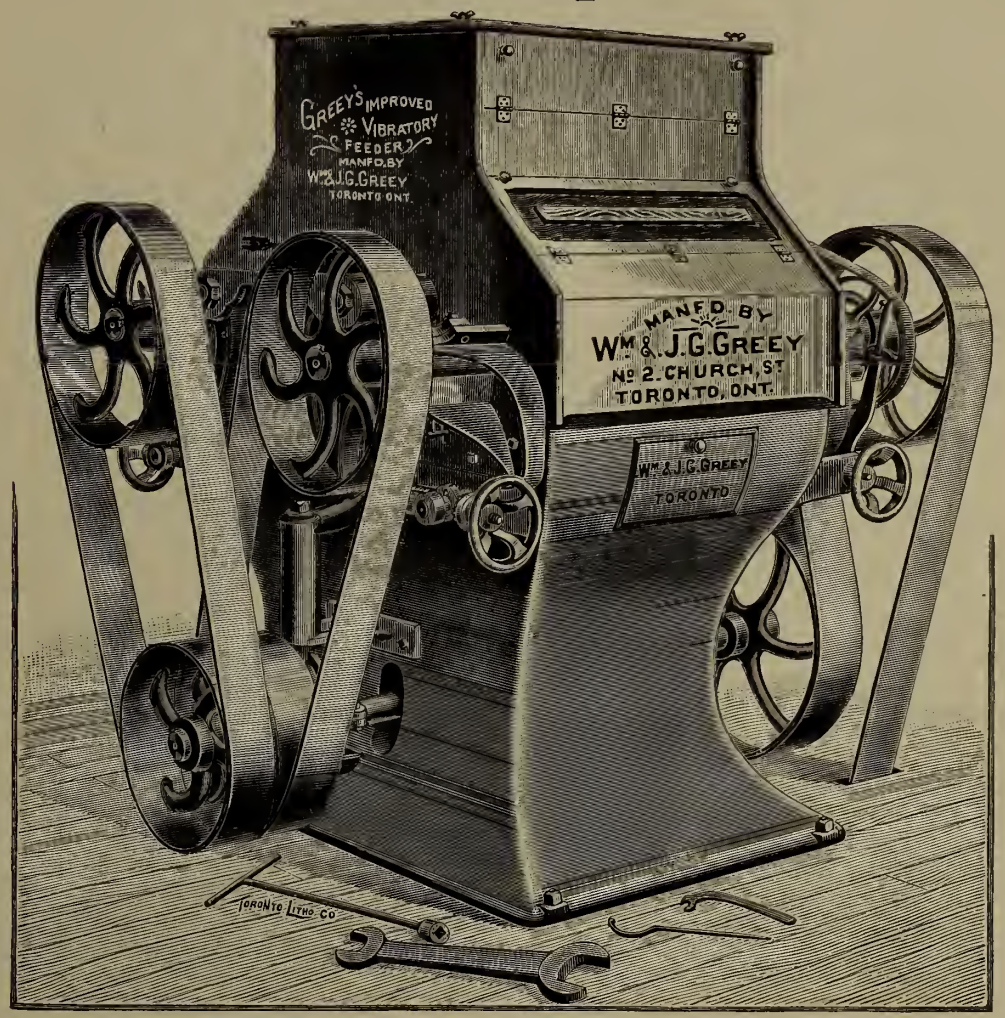
MANUFACTURED BY

WM. AND J. G. GREEY

2 Church St., Toronto, Ont.

The Best is Cheapest in the End

Are always in better working condition
Produce better results
Don't have to be corrugated and ground so often



Mill don't have to shut down for repairs
Makes more money
Considerable saving in expense

GREEY ROLLS

ARE SO HARD AND TOUGH

LAST TWICE AS LONG AS OTHERS

..... Guaranteed to be absolutely free from any flaw .....

GREEY ROLLS ARE THE BEST

Old Rolls ground and corrugated with the utmost precision

Warranted perfectly true, and returned promptly

OUR ROLL GRINDING AND CORRUGATING PLANT is the largest, best equipped and most accurate in the country; our stock of Corrugating Tools the most varied. New Corrugating Tools of any style made to order with the greatest nicety.

MANUFACTURED BY

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JUTE AND COTTON

BAGS AND SACKS

OF EVERY QUALITY AND SIZE REQUIRED.

Strict attention given to prompt shipment.

Original Designs for Brands Prepared Free . . . Printing in beautiful Bright Colors at Lowest Prices

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DICK, RIDOUT & CO., TORONTO, ONT.

Actual Results

NET PREMIUMS PAID TO THE

ONTARIO MUTUAL LIFE

on an ordinary Life Policy of $1,000, No. 1230 during its first 20 years, issued for age 37 :

In 1872....	Paid	$26.57	In 1882....	Paid	$13.29
1873....	"	26.57	1883....	"	12.33
1874....	"	26.57	1884....	"	11 69
1875....	"	24.71	1885....	"	11.35
1876....	"	20.65	1886....	"	11.35
1877....	"	19.16	1887....	"	12.19
1878....	"	17.32	1888....	"	12.88
1879....	"	13.02	1889....	"	12.41
1880....	"	12.65	1890....	"	11.91
1881....	"	13.29	1891....	"	11.38

Total Paid in 20 years....$321.29

F. E. DIXON & CO.

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Star Rivet LEATHER BELTING

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1892 MODEL

Remington Typewriter

Unapproached for Excellence of Design and Construction, Quality of Work, Simplicity and Durability.

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OPERATORS SUPPLIED SEND FOR CIRCULAR

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Every Size and Quality in stock
The Largest and Best Equipped Bag Factory in Canada

BAG PRINTING IN COLORS

A SPECIALTY

. . . DESIGNS FURNISHED FREE . . .

and the Best Work guaranteed

PRINTING CAPACITY 15,000 BAGS DAILY

HESSIANS or BURLAPS

We carry the Largest and Best Assorted Stock in the Dominion.

THE CANADA JUTE COMPANY LIMITED

15, 17, 19 AND 21 ST. MARTIN STREET, MONTREAL

Toronto Agent : FRANK T. BARR, 48 Wellington Street East, Toronto

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DANVILLE, Que.

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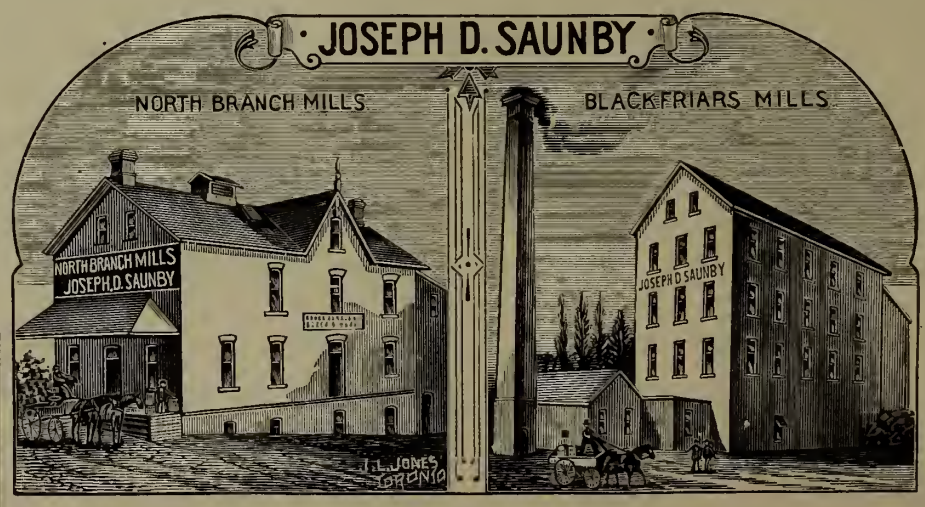
ILLUSTRATED CATALOGUE FREE
H. W. PETRIE
TORONTO, CANADA

JOSEPH D. SAUNBY



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Manufacturer of . . . .

. High Grade Flours

Brands :

"ANSONIA"

AND

"TECUMSEH"

Chopped Feed . . .

In whole or car lots mixed

THE CANADIAN MILLER AND GRAIN TRADE REVIEW

NEW SERIES "MECHANICAL AND MILLING NEWS"

OLD SERIES, VOL. XI. / NEW SERIES, VOL. III. } NUMBER 8. TORONTO, ONT., AUGUST, 1893 { TERMS, $1.00 PER YEAR / SINGLE COPIES, 10 CENTS

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Automatic Arc Dynamos and Lamps
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Send for new pamphlet of Motors and new Book of Testimonials

OUR record for the past ten years as Electrical Manufacturers guarantees purchasers satisfaction.

Ask our customers about cost of repairs on Ball apparatus, which for

EFFICIENCY, ECONOMY

SIMPLICITY and SAFETY

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BRANT ROLLER MILLS

BRANTFORD, ONT.

GEO. McCULLOCH & CO.

Rapid City Roller Mills

RAPID CITY, MAN.

Hungarian Patents
Strong Bakers' and Low Grade

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MONARCH, RED STRIP AND LION BRANDS.

MANUFACTURED BY

THE GUTTA PERCHA & RUBBER MANUFACTURING CO. OF TORONTO.

OFFICE, 61&63 FRONT ST. W. TORONTO. FACTORIES AT PARKDALE, ONT.

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CHATHAM, ONT.

AYLMER MILLS
AYLMER, ONT.

"KENT MILLS" / "THAMES" / "ELGIN"	High Grade Flour
"SWEET HOME"	Second Grade Flour
"BUDGET"	Low Grade Flour
CORNMEAL	Straight Kiln-Dried / Granulated Sunrise, Kiln-Dried
BEANS	Prime Medium / Hand-Picked Medium

Middlings, Bran, Corn, Chopped Feed

SEND FOR SAMPLES AND PRICES

N. H. STEVENS, Chatham, Ont

ESTABLISHED 1856

The J. G. McLaren Belting Co.

MONTREAL

BELTING

MANUFACTURED FROM

IMPORTED OAK-TANNED LEATHER

EVERY BELT GUARANTEED

TORONTO: 76 YORK STREET

THE GOLDIE & McCULLOCH CO., LTD.

High Grade Modern Flour Milling

THE science of milling has of late made very rapid progress, and we invite all who aim at having the best machinery in this line to investigate our system. For general excellence of design, workmanship and material, and for attaining the very best results, we claim that our manufactures in this line are not anywhere surpassed.

Improved Dustless Purifier

Noah W. Holt's Patents

THIS MACHINE of which we are the sole manufacturers in the Dominion, will be found indispensable in every well equipped mill in the country. From careful investigation into its operation in the States, where other purifiers were used in the mill, and from our own experiments, we are satisfied that it supplies a long felt want in all modern mills and entirely obviates a constant source of danger from fire from the dust-laden air in and around all previously constructed purifiers. The power required to drive it is small, bearing no comparison with that required by ordinary machines.

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New Mills Erected and Old Mills Remodelled
OF EVERY STYLE AND CAPACITY, UNDER THE SUPERVISION OF A THOROUGHLY PRACTICAL MILLWRIGHT AND MILLER.

Bolting Cloth OF SUPERIOR QUALITY, AND
General Mill Furnishings ALWAYS ON HAND
.... ORDERS PROMPTLY FILLED ....

WE ALSO MANUFACTURE

The Wheelock Improved Automatic Engine, which we claim to be unsurpassed.
Boilers and all appliances in connection therewith. Turbine Wheels.
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Wool Machinery. Patent Wood Rim Split Pulleys.
Fire and Burglar Proof Safes, Vault Doors, etc., etc.

CIRCULARS AND FULL PARTICULARS IN EVERY DEPARTMENT FURNISHED ON APPLICATION

GALT, ONT.

MERIT TELLS.

THE LARGEST MILLER IN CANADA HAS 350 GREEY MACHINES IN HIS MILLS,

. . MAKING . .

The Best Grade of Flour,

The Cleanest Offals,

And The Closest Yields Produced, or Possible to Produce.

In 1891 W. W. Ogilvie remodelled his Glenora Mills in Montreal, ordering at that time 135 Greey Machines, consisting of Rolls, Scalpers, Purifiers, Dressers, Bran and Shorts Dusters, Dust Collecters, etc., etc.

After operating these machines for about a year, he found that to produce the best results in his other mills it was necessary to equip them with the same machines. He therefore, without asking for quotations from any other firm, placed his order for upwards of 200 Greey machines for his Winnipeg and Royal Mills, making

. . 350 GREEY MACHINES . .

In use in his three mills. These machines have all been delivered. The mills are fitted up, finished, and in active operation, each turning out from 1400 to 2000 barrels daily. These machines can be seen at work in the various mills, and practical men can form their own conclusions.

BETTER MATERIAL, BETTER WORKMANSHIP, BETTER FINISH, never was put into Mill Machinery. It is a well known fact that Mr. Ogilvie spares no expense to keep his mills in the highest possible state of efficiency. It is safe to state that could he have procured better machinery elsewhere, he would not have used Greey machines.

The fact that he placed his order for Greey machines proves that MR. OGILVIE and his EXPERT HEAD MILLERS (the most critical judges of mill machinery) considered Greey machines the best.

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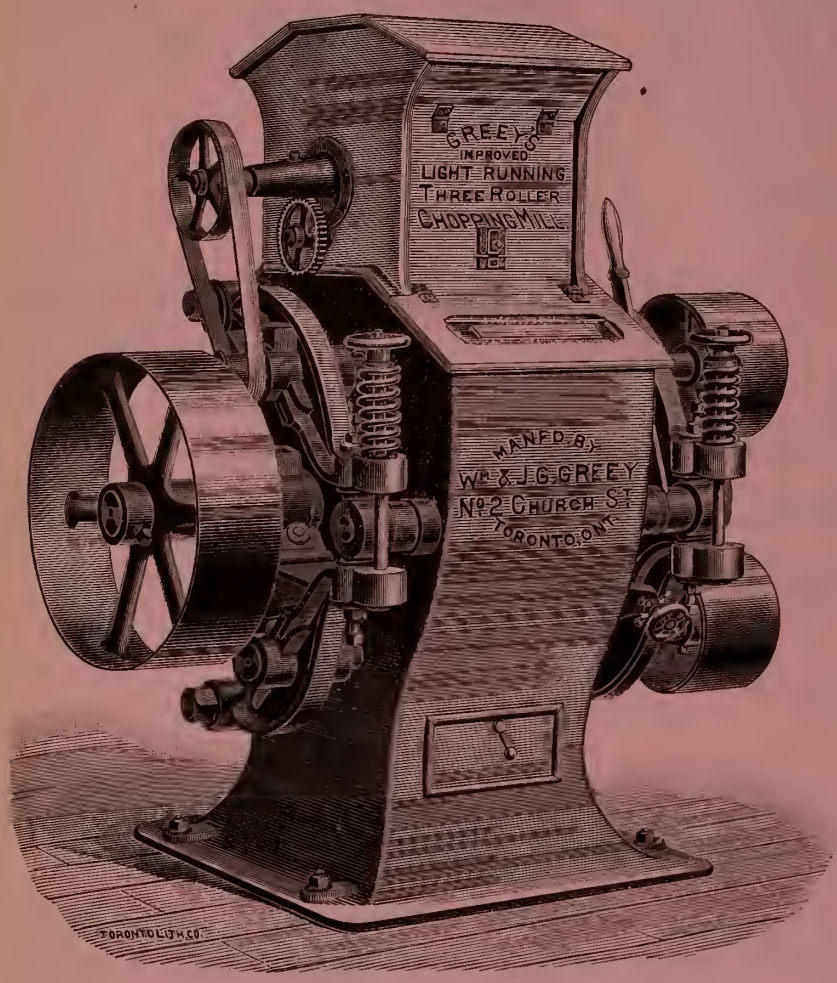

Are the Greey Roller Choppers.

* * *

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. . . . . PICK DRESSING OF CHOP STONE.

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WHERE MODERATE CAPACITY IS WANTED THE

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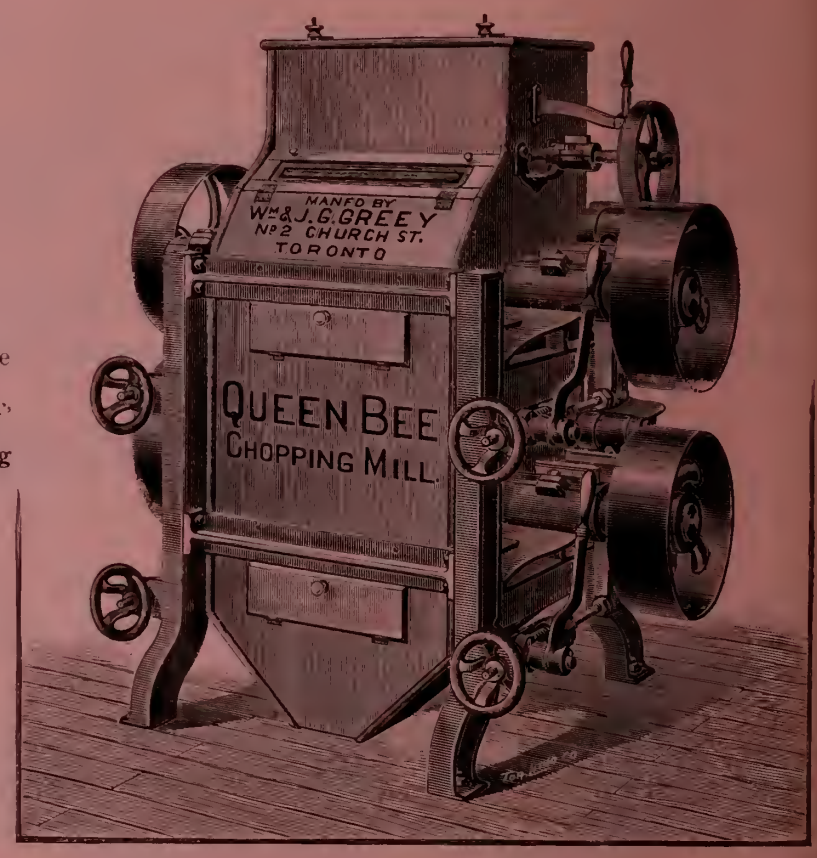
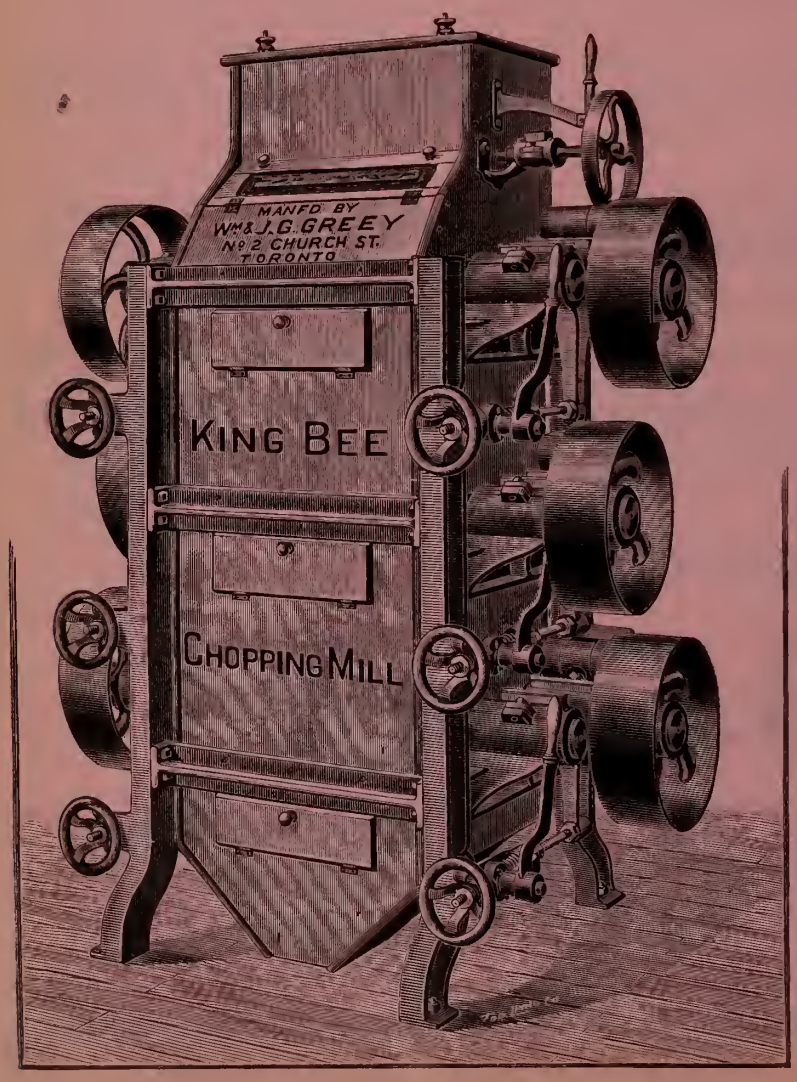


WHERE larger capacity and fine work is required the **Queen Bee** is the machine. But where immense capacity, fine, soft, mealy provender and oat hulls cut up to suit the most fastidious is needed, then the **King Bee** comes into play. They can also be adjusted to all kinds of work.



The rolls in these Choppers are our **Specially Hard Rolls** and corrugated with our special corrugation peculiarly adapted for this work. They will remain a long time in first-class working order and do the best work.

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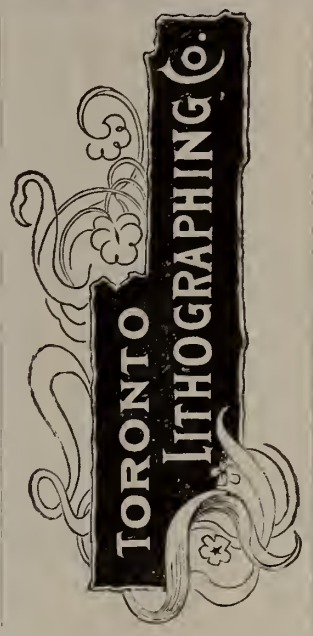

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CANADIAN

LUMBERMAN'S DIRECTORY

AND INDEX TO THE PLANING MILLS AND SASH AND DOOR FACTORIES OF CANADA. . . . . .

THE Publisher is now open to receive subscriptions for the above Directory of the lumber trades. No effort is being spared to make this publication thoroughly complete and reliable in every detail, and it is hoped that all MILLER subscribers interested in the manufacture of lumber, staves, heading, etc., will write at once for particulars. It will cost nothing to have name and business inserted in Directory. Blanks and all particulars sent on application.

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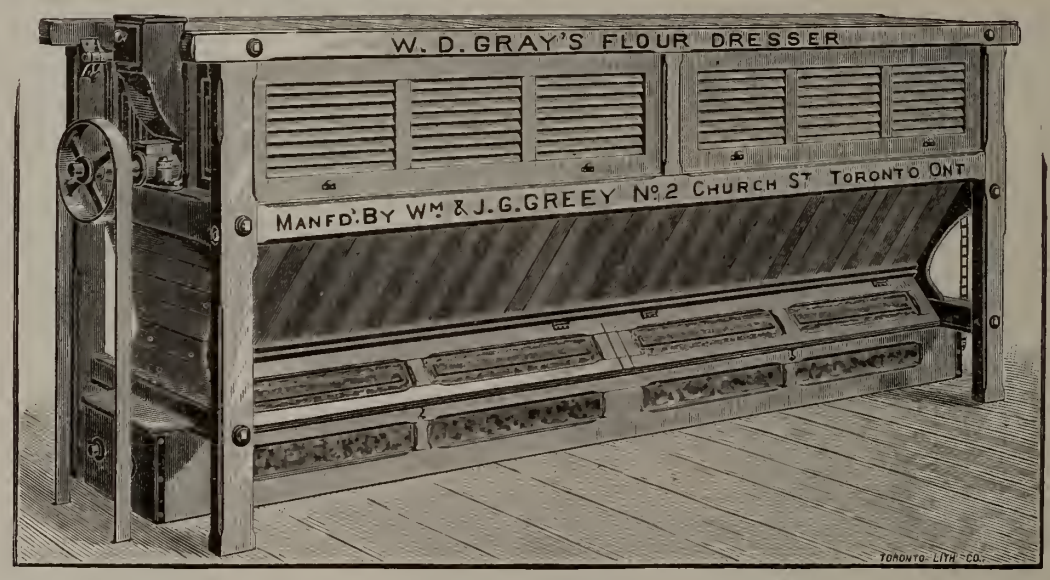

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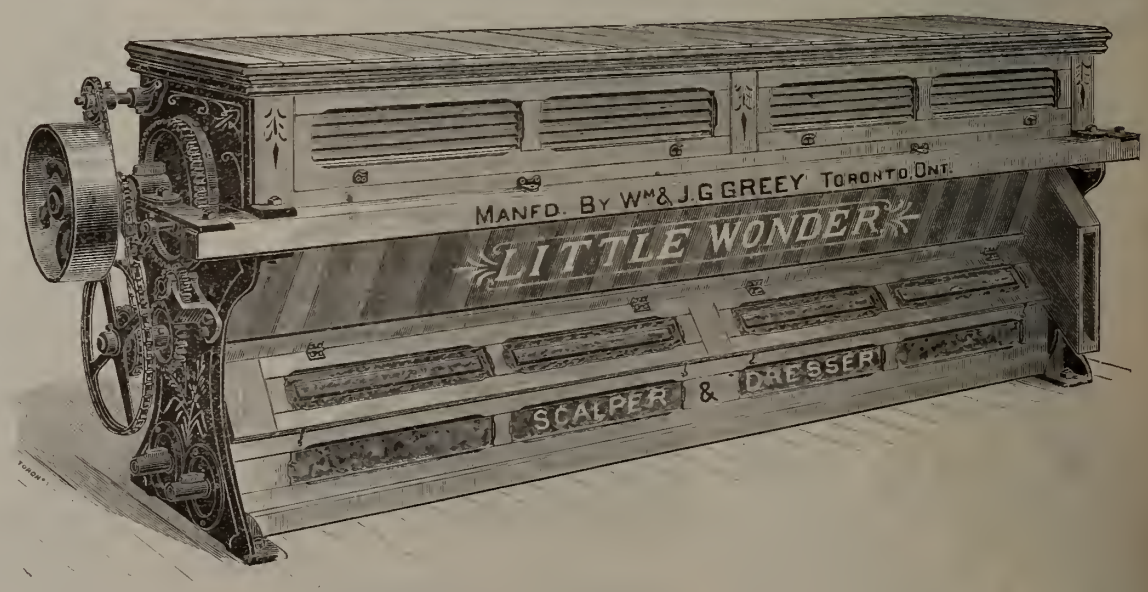

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THE CANADIAN MILLER

Old Series, Vol. XI. } Number 8.
New Series, Vol. III. }

TORONTO, ONT., AUGUST, 1893

{ Terms, $1.00 Per Year
{ Single Copies, 10 Cents

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—BY—
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75 CANADA LIFE ASSURANCE BUILDING
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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

CONVENTION NUMBER.

WE make no apology for giving up the major portion of space in this issue of the MILLER to a report of the annual meeting of the Dominion Millers' Association held on the 9th and 10th inst. The gathering was a memorable one. As the first regular meeting since the final organization of the Association as an incorporated body the proceedings were significant. The reports of the secretary and Central Wheat Buyer, the address of the president, the several valuable papers read by prominent millers, and the discussions that followed these all go to make a volume of the technique and practice of milling than which it would be difficult to supply more profitable reading.

MANITOBA OATMEAL.

SOME complaint was made by the local press in Manitoba lately of the practice of certain dealers in Winnipeg branding the oatmeal manufactured in the Prarie Province with an eastern brand and sending it out as Ontario meal. The inference, of course, aside from the deception, which carries its own condemnation, was complimentary to Ontario-made oatmeal. We took occasion to comment on the matter two months ago, and to give currency to a conviction strongly held by the people of the western province, that it is only a matter of time, supplemented by proper care and cultivation, when oatmeal milling will become a large and successful industry in Manitoba.

Our comments on the subject have brought us the following letter from Mr. Stephen Nairn, oatmeal miller, Winnipeg, Man., which we cheerfully publish.

In your June issue is an article reflecting on the doings of certain parties in the trade here and as special mention is made of Winnipeg, I must respectfully ask you to insert what I know about oatmeal milling and the trade in this province.

The trouble referred to of selling fictitious brands has arisen from the fact of mills outside of Winnipeg selling their output without their name or brand, for reasons which need not be explained to practical millers. This course leaves it open to the buyer to put what brand on sacks that he thinks he will get most for. Such ways of doing business soon cure themselves and I am glad to say it has not been long in this case.

I have been asked to do a similar trade but have invariably refused and I enclose my price circulars of 1st June and 1st July where I called the attention of the trade to what was going on.

I must take issue with you that "Manitoba oatmeal is not equal to what is made in Ontario," and so far as I am concerned my exhibits at Chicago in both the World's Fair and the Manitoba exhibit will bear examination with any. I don't see why we should be behind. We have the oats, the practical knowledge and I think can hold our own with any eastern manufacturer, and I for one am not afraid to have my output sold on its merits and proper name and brand.

EDITORIAL NOTES.

AS practical men well know, belting in general use is not well adapted to slow-motion uses, or for driving any machine or piece of machinery that has a very slow motion. Nor is it always convenient to drive such with gear wheels, even when it is desirable to do so. As a substitute for both, no better thing can be found than what is commonly called "link-belting." It is well adapted to the purpose and as reliable as gear wheels, there being no chance to slip or run off the wheels.

THE effects on the human body of various kinds of dust from factories have been investigated by the hygienic museum of Vienna. The inquiry shows that the most serious diseases from this source have their seat in the respiratory organs. The dust is deposited on the fine mucuous membrane of the air passages, and occasions inflammatory conditions of an acute or chronic character. The influence depends much on the fineness and adhesiveness of the dust. The dust of rice and flour mills exerts injurious action only by its fineness, while the particles from metal and stone injure by their wounding properties. Dust from textile fibers is especially harmful because it clings so tenaciously. Every foreign substance inhaled produces irritation, and if the system is unable to get rid of the offending substance a condition of catarrh soon results. Some persons have great power of resistance, working unharmed to old age in a dust-laden atmosphere, but such individuals are rare.

AN impatience of details is a frequent cause of failure in business. Men go rushing ahead, throwing any amount of push and energy into their business, making money, it may be, in good sized sums, but studiously obtuse to a leak that has been sprung somewhere in the vessel, until often it has gone beyond their ability to remedy the trouble. Or it may be that they have become aware of things hanging loose in some department of the mill, but they satisfy themselves by saying it is a trifling affair, and other matters are more important and calling for their time and effort. No greater mistake can be made by any business man than a neglect of the little economies of his business. What these are it matters not; be master of them, not they master of you. Some one has remarked: "A cent a barrel is not much, but it amounts to three solid dollars in a 300-barrel per day mill." This is a practical and direct interpretation of the old saw that the pennies make the pounds. In the present year of grace when millers' profits are sometimes hardly observable with the naked eye he needs to closely watch where even a cent a barrel can be saved.

THE position of statistician of the Department of Agriculture for the United States is seemingly a hard one to fill. For a time the occupant was a Mr. Dodge, whose reports got so absurdly away from the mark that a year ago a crisis was reached and responsive to the criticisms of both the technical and daily press he was, in vulgar parlance, fired. His successor, though hardly twelve months in office, is already commencing to enjoy some of its least desirable sweets. It is not clear that the statistician himself is to be blamed, rather that the trouble comes from the character of the reports supplied by the correspondents of the department. These persons would appear to be influenced by the Alliance leaders who hold that values will run high if crop conditions are made lower than they are. In other words the department is being used to boom the interests of a particular class and false reports are supplied. Government statistics, as do all statistics for that matter, lose their whole force when not honestly compiled and it looks as though the statistics of the Department of Agriculture of the United States, so far as grain returns are concerned, would soon become thoroughly discredited. Fortunately in Canada it is not often that the figures of our blue books are brought into question.

THE one stupendous problem before which the student of social problems stands appalled is the deplorable condition of the masses. There is much in these conditions to test his faith in the final happiness of humanity. Perhaps we should not wonder that in his hours of desperation a sigh goes up for a return of the days that have gone. But what of these days? Here is one view of the situation given by Engineering, of London, Eng.: "It is when we compare the condition of the poor of to-day," says Engineering, "with that of previous ages, that we see how much the inventor has done for humanity. To know how hard life must have been before the advent of machinery, we have only to imagine a family set down on an island, and called upon to provide all their food and clothing without the aid of modern mechanical appliances—to plow and reap; to thrash, winnow and grind; to raise cattle, to kill and dress them; to shear, card, spin and weave their wool; to make and mend their clothes, to provide, soap, candles, tools, cutlery, earthenware, paper, pencils, nails medicines, leather, boats, ropes, and the thonsand and one things that are needed in a home. Evidently it could not be done, even if labor were continued from dawn to eve, and then extended far into the night; and this under favorable conditions of a yeoman's family, without rent to pay. How much worse must it have been under the exactions of a feudal landlord! Two-thirds of what we consider necessaries must have been omitted from the list of that day, and to sore toil must have been added scanty fare and insufficient clothing."

THIS is an age when the enterprising citizen sees—or believes he sees—"millions in it." At any rate he is ready to take his chances on some scheme with the hope of extracting the millions. It is an age of gigantic schemes, and, as the American Artizan remarks, the advancing years seem to produce an increase rather than a diminution in the number of such schemes. "We have all heard," this journal says, "of the scheme for expending $40,000,000 in the construction of a monster dam in the vicinity of Newfoundland that would turn the gulf stream back on itself and give New England a tropical climate so that the Granite State boys could climb palm trees to shake off the succulent cocoanut on their own bleak hill-sides, while the Rhode Islanders would offer scant encouragement to the peripatetic Italian banana vendor, as each and all of them would have a banana tree in close proximity to his own back porch. A more recent scheme is the bridging of the English Channel between Dover and Calais. It is said that this scheme has gone so far that a company has been formed to secure the necessary concessions from the British and French Governments. The cost of the bridge is some such bagatelle as $240,000,000. The latest scheme is one for roofing London and other large cities, and thus doing away with the umbrella trust. The projector has not yet considered any such vulgar and insignificant detail as the matter of cost, and hence has not enlightened the public on this point. Such schemes are, of course, largely visionary, but they indicate a tendency to grapple with the most stupendous undertakings that is in a manner characteristic of the nervous and progressive age in which we live."

MILLERS IN CONVENTION.

ANNUAL MEETING DOMINION MILLERS' ASSOCIATION.

THE Dominion Millers' Association grows apace both in numbers and influence, as was plainly indicated by the attendance at the annual meeting in the Board of Trade Building on Wednesday, August 9th.

Mr. M. McLaughlin, president, occupied the chair, and other officers associated with him at the meeting were: A. H. Baird, Paris, 1st vice-president; E. S. Edmondson, Oshawa, 2nd vice-president; William Galbraith, Toronto, treasurer, and C. B. Watts, Toronto, secretary. About one hundred and fifty members were in attendance. Prominent among these may be named:

James Hamilton, Glen Huron; James Hodd, Stratford; E. S. Edmondson, Oshawa; James Stark, Paisley; James Wells, Plattsville; Fred. Heinbecker, Hanover; Adam E. Ratz, Tavistock; Wm. Pearson, Singhampton; J. E. Pearen, Brampton; J. H. Dracass, Streetsville; George Shepherd, Primrose; D. Goldie, Ayr; Fred. Rollins, Madoc; Jacob Steinmiller, Walkerton; Alex. Dobson, Beaverton; J. H. Harvey, Coboconk; A. Wolverton, Wolverton; R. B. Cooper, Belleville; J. G. Bechtel, Burford; J. R. Dafoe, Napanee; A. Hilburn, Neustadt; H. L. Rice, St. Mary's; H. A. Mulhern, Peterboro'; W. Walker, Norwich; P. R. Hoover, Green River; John Campbell, St. Thomas; Chas. Smith, Campbellford; N. H. Stevens, Chatham; J. Rutherford, Blenheim; Jos. Kidd, Tilbury Centre; T. O. Kemp, Seaforth; Angus Plewes, Markdale; D. C. Thompson, Orillia; John Galbraith, Allandale; F. L. Green, Greenwood; W. Wenger, Ayton; Joshua Howard, Hagersville; James W. Old, Caledonia; James Huxtable, Hornings Mills; Robert H. Vick, Orillia; S. R. Stuart, Mitchell; W. J. Hewson, Teeswater; A. McFall, Bolton; T. F. Brown, Welland; John Brown, Toronto; J. D. Saunby, London; G. S. Baldwin, Aurora; James Fair, Clinton; John Hull, Lakefield; R. M. Dixon, Lakefield; T. F. Dexter, Sebringville; Thos. Foulds, Oakville; Robert Noble, Norval; John McKay, Bowmanville; George H. Harper, Dundas; W. H. Meldrum, Peterboro'; John W. Meyers, Listowel; J. D. Flavelle, Lindsay; Thomas Sadler, Lindsay; W. Snider. Waterloo; W. D. Mace, Tamworth; W. F. Finnemore, Burlington; G. S. Middough, Dunnville; H. B. Schmidt, Newtonbrook; W. B. Robson, Hamilton; R. A. Thompson, Lynden; Harold Barrett, Pt. Hope; J. A. Cox, Almonte; H. Shaw, Oakville; John Rock, Springford; D. A. Thompson, Orillia.

The meeting was called to order at 2.15 p.m., when the submission of the officers' reports formed the first order of business.

SECRETARY'S REPORT.

The secretary, Mr. C. B. Watts, read his report as follows:

Although there was only one general meeting of the Association during the past year, there have been matters of great importance to the milling industry dealt with during the interval since our meeting a year ago.

The action taken on different occasions and in various ways to protect the interests of our members, which would have been impossible but for the existence of this Association, and the fact of its being an incorporated body, gave it such weight in various quarters that your committees and deputations have been enabled to accomplish much which would have been impossible had they represented only themselves individually or a mere local society.

The Executive held three meetings during the year, on Sept. 2nd, 1892, June 7th, 1893, and August 9th, 1893.

The Freight Committee also met twice during the year, once on the 6th Sept. 1892, and the second occasion on the 23rd June, in the city of Montreal, where they were requested to meet the general manager of the Grand Trunk Railway and the Vice-President of the Canada Pacific.

During the year there were 14 mills applied for membership in our Association, while a like number were turned out, or for various causes allowed their membership to lapse, so on the 30th June our membership was the same as last year.

The following are the names of the 14 new members who joined to 30th June: Alonza Birge, Eramosa; W. F. Stewart, Durham; T. Dexter & Son, Sebringville; Cookshire Milling Co., Cookshire, Que.; Heslop Bros., Pt. Robinson; R. T. Walen, Ormstown, Que.; Flesherton Milling Co., Flesherton; Jas. Wilson, Fergus; M. N. Squire, New Lowell; H. Hollingshead, Dutton; Knight & Hill, St. Marys; Geo. Needler, Millbrook; D. C. Thompson, Orillia; Frank Harris, Springfield-on-Credit.

Since that date we have received applications from three new mills which we admitted at the last meeting of the Executive Committee.

Our membership now represents a milling capacity with an output of 25,000 barrels of flour daily.

The treasurer, Mr. Galbraith, will lay before you his financial statement, which will prove a gratifying one.

Although the sum of $249.67 was paid on account of the expenses of incorporation, in addition to the ordinary expenses which are incurred in the working of the Association, from year to year, there was a balance on hand of $223.11, as against a balance last year of $94.97. There was in addition to the above the sum of $63.54 on account of advertisements in the Bulletin.

As liabilities we have only the unsettled account of Mr. Edwards, of Peterborough, for his services in preparing the Act of Incorporation, for which he claimed $185, and also $35 due to members who paid their fees twice during last year.

ONTARIO AND MANITOBA WHEAT AND FLOUR STANDARDS.

You will remember that last year it was arranged by the Dominion Government that in future your association should have a representative on the boards of examiners fixing the above.

From the names submitted at the request of the Government, they selected Mr. T. O. Kemp, of Seaforth, to act on the Ontario Grain Board, and your president, Mr. M. McLaughlin, to represent the association in fixing the Manitoba standards in Winnipeg, with the result that this year's standards are without doubt more in accordance with the requirements of both millers and grain exporters, and at the same time are type samples of the average grain produced in this country.

Mr. Robt. Noble, of Norval, was appointed to go to Montreal and assist in fixing the flour standards.

On our request the Government has also decided, in future, to supply your secretary for the convenience of the members with all the flour and grain standards, the same as is supplied to their authorized inspectors.

INSPECTION OF MANITOBA WHEAT.

While on the whole the inspection of Manitoba wheat, especially since October last, owing no doubt to the vigorous representations made by your association last year, has been a great improvement over that of previous years, still there has been occasionally good ground for complaint.

The Government having intimated that they would hold a survey on any case that our association would bring before them, on the 21st of September last, my attention being called to a lot of 3 hard, some of which I had purchased, that was in Point Edward elevator and Fort William, I wrote to the Minister of Inland Revenue, asking that an investigation be held. He telegraphed Mr. Gibbs to come down from Port Arthur, but he could not come for a week, and then he said he could not come at all, so the Commissioner instructed the Collector of Inland Revenue in Toronto, and the Toronto inspector to take such steps to investigate the matter as the association might wish. The very day these instructions arrived a telegram was received from Winnipeg, by the purchaser, making a reduction of $500 on the lot of 10,000 bushels, and as most of the wheat by this time had been shipped to various points it was thought advisable to drop the matter, and the Collector of Inland Revenue promised to make a full report of it to the Minister, and I have no doubt any representations made by the association in the future will receive prompt attention.

In the above case this $500 should have gone proportionately to those using wheat, and not by the middle man here, who probably received very largely, if not entirely, the benefit of the reduction.

RE BRAN AND MILL OFFALS.

On January 13th last a deputation consisting of your president, Mr. Dundas, of the Sadler, Dundas & Flavelle Milling Co., and R. Noble, of Norval, and your secretary, waited on the Minister of Agriculture, The Hon. A. R. Angers, at Toronto, and requested him to cause to be conducted a series of experiments at the Experimental Farm, to show the value of bran and shorts compared with other grains for feeding purposes, and from the information gathered from other sources we were convinced that if the value of bran, for both feeding and manurial purposes were known to the farming community, the price of mill offals would be much higher than at present obtained. He promised that the experiments asked for would be conducted as soon as possible, and Professor Saunders has since written that the experiments would be made as soon as they completed the feeding experiments now under way.

RE GRINDING IN BOND.

A motion having been made by Mr. Davin, M.P. for Alberta, that the Government rescind the privilege of grinding in bond, which has been enjoyed for many years by the Ontario millers your President interviewed the city members, and finding that the subject was misrepresented and misunderstood by the members at Ottawa, and that an active canvas was being prosecuted to get the motion through the House decided that steps should be taken to lay the claims of the millers before the Government.

After consulting with such members of the Executive as were in the city, your President and Secretary went to Ottawa on February 13th, and laid the matter fully before the Minister of Agriculture and the Comptroller of Customs, as well as explaining to a number of the most prominent members of the House, the position the millers might be placed in should we have a failure of the wheat crop in Ontario in event of Mr. Davin's proposal passing.

A circular letter was also prepared and sent to each Minister, and to a number of the most active members in the House, who had promised to assist us in defeating the motion.

I am pleased to be able to report that some of our members have been able, during the past month or two, to secure export orders for flour, by bringing in the American wheat which was so much below ours in price, when otherwise their mills would have had to stand idle, had the grinding in bond privilege been rescinded, which no doubt would have happened but for the action taken by your Association.

LOW GRADE FLOUR.

Early in March it was reported that low grade flour was coming into the Lower Provinces, and that the sellers were making from $75 to $100 per car profit. This appearing impossible with the duty of 75c. per barrel on flour, we feared it was being brought in and entered at the Customs as feed, and so the attention of the Comptroller of Customs was called to the matter.

He replied that a circular had been issued drawing the attention of the officers at the various ports two years ago, and he would again direct their attention to the fact that all flour, no matter of what grade, or for what purpose used, was to pay 75c. per barrel duty.

RE MARINE INSURANCE.

In January last I completed arrangements with Messrs. Dent & Vaizey, members of Lloyd's Underwriters, London, E.C. to issue certificates on their behalf. The rate secured on flour was an extremely favorable one, being 3/8 of 1% from the mill to destination. Any loss amounting to 5% on the value of a hundred bags, which at present prices would be about $10 damage, is collected under this certificate, while under the old certificate no loss unless it amounted to $75 or over was allowed, and the premium charged was considerable higher than the above.

Under the Ontario Insurance Law it was necessary to register before doing business. Lloyd's Underwriters not being a corporate body, but what might be termed a temporary partnership, it was difficult to comply with the Act, but such a high position do Lloyd's occupy in the Mercantile world that the Inspector of Insurance had a special clause inserted in the act at the last Session, when making other amendments, that registration is now granted to them, and I hold the certificate from the Government to that effect.

As this involved considerable expense, the account only shows a small profit to the association as yet, but a great saving has been made to the millers insuring through the association in reduced premiums, and had the privilege of collecting a loss, as stated above, if amounting to only 5 % of the value of the shipment.

On May 4th your president and secretary waited on the Minister of Trade and Commerce, and Minister of Finance, and drew their attention to Newfoundland as a market which consumed about 335,000 barrels, every pound of which had to be imported, and if Newfoundland could be brought into confederation, so the control of this market could be secured to Canadian millers, it would represent a consumption of more than four times the average exports of flour during the past ten years, and would also form a good market for butter and other agricultural products of the Dominion, of which they import largely also. The Minister of Finance, however, appeared to think the cost would be more than any advantages which could be derived by the Dominion at large.

The following members had their mills destroyed by fire during the year: E. S. Edmondson, Oshawa; Exeter Milling Co., Exeter; N. Wenger & Bros., Ayton; N. McCahill & Co., Forest. The total loss sustained was estimated at something over $66.000, while the insurance was slightly over $50,000. The mills also of Peter Shirk. Baden, and John McLaren, Renfrew, were slightly damaged by fire, and in both cases fully covered by insurance.

I regret to have to record the death of two of our members, Mr. J. A. Younie, of Embro, and John Munroe, of Cornwall.

The report was unanimously adopted by the association.

TREASURER'S REPORT.

The report of the treasurer, Mr. Wm. Galbraith, reads as follows:

I beg leave to report that for the year ending June 30th, 1893, the receipts from all sources during the year amounted to $1,551.82, made up as follows:

RECEIPTS.

Fees for last year, 1—200 barrel mill	$10 00	
" " 3—100 "	15 00	
Advertising last year	50 00	
Bulletin, last year	5 00	
Total on account of the year ending June 30th, 1892		$80 00
Fees for current year, 167—100 barrel mills paid	835 00	
" " 23—200 " "	230 00	
" " 9—300 " "	135 00	
" " 4—400 " "	80 00	
" " 2—500 " "	50 00	
" " 6 paid half year's fees.	15 00	
Total fees received year ending June 30th, 1893		1,345 00
Entrance fee, 14 mills paid $5 each		70 00
On account of advertising, 1893	13 54	
On account of Bulletin, 1893	1 25	
		14 79
Received fees paid twice	35 00	
Received amount of account of Central Wheat Buyer's office	8 00	
	43 00	
Less commissions on cheques	97	
		42 03
		1,551 82
Cash on hand 1st July, 1892		94 97
		$1,646 79

DISBURSEMENTS.

Expenses annual meeting, 1892	$10 00	
Railway expenses of members attending Executive Committee meetings, 1892	87 35	
Incorporation expenses (on account)	249 67	
Printing (Bulletin, etc.)	127 35	
Stationery (envelopes, etc.)	10 48	
Salary of Secretary	500 00	
Postage (on Bulletin, etc.) $139 28		
Postage cards for receipts 3 00		
	142 28	
Office rent (Association's portion)	60 00	
Clerical help (Association's portion)	100 00	
Deputation to Ottawa	33 00	
Deputation to Montreal, and telegrams	72 15	
Flour (samples from West Indies)	15 00	
Bank charges	3 40	
Refund on account of fees paid twice... $5 00		
Amount received for Central Wheat Buyer's office 8 00		
	13 00	
		$1,423 68
Cash on hand		223 11
		$1,646 79

The report was deemed highly gratifying, and was, on motion, received and adopted by the association.

REPORT OF EXECUTIVE.

The report of the executive, which follows, gives an intelligent idea of the energetic and successful efforts put forth by the officers of the association to carefully study and guard the milling interests of the Dominion during the year now closed. The report says:

The Executive Committee held three meetings during the year. At our first meeting we appointed the Freight Committee, consisting of the following gentlemen: M. McLaughlin, Toronto; Peter Shirk, Bridgeport; J. D. Saunby, London; J. D. Flavelle, Lindsay; Jas. Goldie, Guelph; A. H. Baird, Paris. Also the Seed Wheat Committee as follows: Jas. Goldie, Guelph; Chas. Whitlaw, Paris; W. H. Meldrum, Peterboro'; J. C. Vanstone, Bowmanville; E. S. Edmondson, Oshawa; Wm. Snider, Waterloo; J. G. Bechtel, Burford; Jas. Cumming, Lyn; N. Wenger, Ayton; R. Noble, Norval.

Having been requested by the Government to submit the names for appointment on the Board of Examiners to set the wheat standards both for Manitoba and Ontario, and also the flour standards, we recommended the following gentlemen: T. O. Kemp, Seaforth; Jas. Goldie, Guelph; W. H. Meldrum, Peterboro'; J. C. Vanstone, Bowmanville, for the Ontario board to set the Ontario standards; M. McLaughlin, S. W. Scott, Ottawa, for the Manitoba board, and J. L. Spink, Toronto, and R. Noble, Norval, on the Board of Flour Examiners.

RE GRINDING IN BOND.

The association is to be congratulated on the defeat of the motion made in Parliament to do away with the grinding in bond privilege. The representations of your delegates who went to Ottawa for this purpose resulted in the Government refusing to allow the proposed change to be made, which might have had disastrous results on the milling interests of Ontario. While this privilege is not of any direct benefit to the small mills, it indirectly is a great value to them. When wheat is scarce the large mills can purchase their wheat in the States to fill their export orders when otherwise they would have to buy against the small mills in the local market. Also by enabling the large mills to hold their export trade during a short crop in Ontario, the small mills are relieved from undue competition, which would occur if the large mills were compelled to dispose of all their flour locally.

NEW MARKETS.

With the object of finding new outlets for the product of our mills we procured from the West Indies a barrel of each of the three best known brands used in the West India Islands, and samples were distributed to those millers asking for them. The flours were also tested by your president, and a report of the same published in the Bulletin, as were also the names of the agents who handled the flour at the various ports in the West India Islands. The following is a report compiled by your secretary in reference to this trade:

"I have endeavoured to ascertain the quantity of flour imported yearly by these islands, and I have secured from the most reliable data at hand the following table from 1880 to 1890 inclusive: Bermudas, 15,000 barrels; Montserrat, 2,300; Dominica, 7,500; St. Lucia, 9,000; British Guiana, 136,000; Danish West India Islands, 24,000; Antigua, 17,000; Guadeloupe, 45,000; Martinique, 53,000; Barbados, 125,000; Dutch West India Islands, 21,000; making a total of 529,800 barrels yearly.

"The whole of this trade is virtually in the hands of the United States, in fact one might almost say of the New York millers, but that these markets are open for Canadian flour is shown by the fact that although only one or two Canadian firms have attempted to do business there in a systematic way, they have a steadily increasing trade, and the flour sent forward gives every satisfaction. I am advised that United States flour will spoil just as quickly as the Canadian flours, under the same

circumstances, i.e., if large quantities were taken to the Islands and remained there month after month before going into the hands of the consumers, as is the case when flours are sent down indiscriminately, on consignment.

"United States millers have their agents on the islands, who keep them advised, from time to time, as to the quantity on hand, and they send forward by each vessel only sufficient to supply the wants till the next vessel sailing will arrive, thus keeping their reserve stocks in New York, where they are not subject to the severe climatic conditions existing on the Islands.

"To secure this business the Canadian miller must go about it in the same way, and have a permanent agent in the Islands, who will ascertain exactly what kinds and quality of flour is used on the various islands, and see as far as possible, at first at least, that it goes into the hands of live and reliable dealers, and especially that no greater quantity of flour is brought forward to any port than will be needed till future supplies arrive.

"The necessity of this will be apparent when you learn that at some of the ports one carload of flour will meet all requirements, and if two carloads are sent forward on one boat, the second carload would likely spoil before going into consumption, and would not only give Canadian flours a bad name, but inevitably entail serious loss upon the miller.

"The United States brands, such as 'White Light,' 'Nickerbocker,' 'St. Lawrence' and others, have been on the market for years, and their reputation is established. These flours are bought entirely on account of their brands. To such an extent is this true that some of these flours were placed in the market under another brand and would not sell except at a reduced price, and the consumer was not satisfied with the quality.

"If the reputation of certain Canadian brands were established in the same way, the flour could be sold for years afterwards largely on the brand alone.

"Considerable of Canadian flour having been shipped in flat hooped barrels, which unfortunately are inseparably associated with the old days when flour went forward in sailing vessels packed in the hold with wet green lumber, and arrived sour or out of condition, has greatly added to the difficulty of introducing Canadian flours into the East India market. Then again the round hooped barrel is made use of by the peasant or negroes to pack sugar, yams, lime, etc., in, or they sell them for this purpose, which fact alone would insure their purchasing flour packed in the round hooped barrel even if that in a flat hooped barrel were a better value. To do a successful business in these days it is necessary to cater to the wants and prejudices of the consumer, and not attempt to educate them up to our standard, and also to send them only flour fresh ground, and made from fully matured wheat, and not attempt to send forward, as I fear has been too often done, flour which the miller was anxious to get rid of and could not find a sale for elsewhere.

"The expense of properly introducing Canadian flours to these islands is too heavy for any one mill to bear, and the trade, if secured, would take the surplus flour from a large number of mills The best, and in fact the only way it can be successfully done would be to form a trading syndicate, composed of such mills as wish to extend their trade, and which so situated have the facilities for manufacturing the kinds and qualities of flours that are required for this market, and that can be relied upon to invariably ship flour up to the standard of quality.

"The orders could be distributed among the mills pro rata, and the expense borne proportionately. The flour only being fresh ground and shipped just in time to catch the steamer sailing to the Islands, would undoubtedly arrive in good condition, and give every satisfaction. There is also a considerable trade done there in oats, split peas and beans, which the mills going into the syndicate could supply to advantage. There is also some trade in pollards, which strangely to say, are imported almost exclusively from England; the United States shorts not being in favor, on account of containing too much low grade flour, making them sticky in the mouths of the animals.

"Judging from the price obtained in New York for the flours, of which we procured samples and the report made on them by your President after careful examination, there should be no trouble in our millers meeting their requirements as to quality, and securing for themselves a good margin of profit after the flours are once introduced. One report that I received from the Islands, says they have handled considerable Canadian flour without any complaint, it selling immediately on arrival, and that they do not receive enough to meet the requirements of their trade."

The report was promptly adopted by the meeting.

THE PRESIDENT'S ADDRESS.

The annual address of President McLaughlin was listened to with unmistakable interest and attention by the meeting, and brought forth hearty applause and a vote of congratulation and thanks at the close. The President said:

It is my duty to move the adoption of the report which has just been read to you.

Before I do so I wish to welcome you, and those who have accompanied you to Toronto, and to express my pleasure at the large attendance.

I hope none will leave the annual meeting without having profitted in some way by the proceedings, nor without having added something to the general good of the milling business.

At the end of our first year of corporate existence it gives me great pleasure to congratulate you, as I can do, on the condition of our association. We are stronger than ever before in the number of our members in good standing. We are stronger in our appreciation of the work done and to be done by the association.

We recognize more clearly than ever, that many evils which are beyond the reach of individual effort to remedy, are controlable by the united efforts we give them in our associate capacity.

The work that has been undertaken and accomplished during the year, you have heard in the reports submitted, but aside from the work that has been done for the good of the milling business, the meeting in harmony and good fellowship, even once a year, of so large a number of men engaged in keenest competition with one another, is of more than passing value. Such a meeting as this cannot fail to soften the asperity of the conflict.

It gives me the greatest pleasure, too, that I can extend my congratulations beyond the limits of our corporate and trade affairs. As members of a Dominion Association it is our privilege and duty to indulge in a wide view, in doing which, I am proud to say, we can congratulate ourselves on the condition of the Dominion of Canada.

Look where we will, the world over, we find no country having less cause for dissatisfaction or despondency than our country. The past year has not been one of our best years, but where is the country that has suffered less. Though prices have been low, our crops have been large, and in quality, unsurpassed. Our finances rest on so sound a basis that the demoralization and want of confidence, which at the present time are shrivelling the efforts of other communities, are unfelt by us, except in so far as they are reflected from beyond our borders. If Canada has less of universal prosperity than, in better times we could look for, it has at all events so great a share as to be the envied of larger and older communities. If I may indulge in a look ahead, what in the way of prosperity cannot we expect.

The country which grows the best wheat known to the milling world, and which has only begun to bring under cultivation the millions of acres that produce it, has a future that cannot be shown in colors too bright.

I have warrant for saying "the best wheat known to the milling world." In England, where the cargoes from every exporting land under the sun converge, the Hard Spring wheat of Canada brings the highest price of all, and English millers are the best judges of the values of wheats, for their opportunities for becoming so are the greatest. We have unequalled soil, and that in illimitable extent; we have wealth, too, of mines and fisheries and timber beyond any other country, and a commercial navy that is one quarter in extent of that of the entire world. With it all we have the reasonable and growing faith in ourselves, based on an increasing knowledge of our possessions, which cannot fail to overcome all obstacles to the growth and development of our country.

Our position as one of the great wheat growing colonies of that Empire which buys the surplus wheat of the world, is a still more enviable one in the estimation of that large and increasing number of men who believe in the wisdom and ultimate accomplishment of Imperial Federation. Our future is full of brightness, though in the attainment of it we must pass occasionally through a year of disappointment, even though we must, from time to time, encounter conditions such as some of us have murmurred at during the year just closed.

A long continued decline in the price of wheat and flour, the world over, affected adversely theprofits of all of us who are here assembled, not so much hecause we are millers, as because we insist on being speculators as well. Many of us has have persisted in carrying down the decline more than our share of the crop. Those amongst us who have confined our operations to our legitimate business of milling and have been governed by correct business principles have not had much cause for dissatisfaction with the year's results, and this too, notwithstanding the severity of the competition among ourselves, and severe enough that competition has been, so severe indeed that margins of profit seem at times to have been lost sight of, and unhusinesslike principles introduced.

Why should we who pay cash for every bushel of raw material that enters our mills, press the manufactured product on our customers on thirty or sixty days' time, as some of us have been doing. Selling on time is as unnecessary as it is unprofitable. Many of us have abandoned credit on our wholesale selling, and have found that it is as easy to sell for cash as it is to sell on time. At the beginning, and until our customers and the trade have discovered that our rule is cash without an exception, there will be some annoyance, but once that discovery is made the trouble is ended.

One of the greatest satisfactions in my own business during the year, has been that I am doing an exclusively cash business in all wholesale transactions. There is no further anxiety when making a shipment as to whether I shall be paid for it or not. Because someone else is giving time is no reason why I should do it. Further, that my competitor is giving time is no reason why I should give time. The only way to do a cash business is to do it. If no dictation from even our best customers be admitted in this regard, in a marvellously short time we will have the satisfaction of feeling that we stand on firm ground in at least one respect. Fortunately my remarks are applicable to but a small percentage, I believe, of the members of our association, but it is an evil that has been complained of to us during the year as a growing one.

I have alluded to my own recent experience because I want to impress you with my conviction that it is as easy to do a cash business as a credit business when we are selling wholesale and at wholesale margins. By wholesale I mean in car lots or over.

Another evidence of had management I wish to allude to. Years ago it was my misfortune to be in competition with a miller who gave the farmers for their wheat the present price, and the rise; if to-day's prices were $1, he took in their wheat guaranteeing them $1, and such further advances as might take place up to the day on which they took their money, even though they chose to defer doing so for months. That miller, though prosperous when he hegan this, fell twice into the hands of the official assignee before I lost sight of him, and no one will he surprised that he did.

His rival has appeared lately in the miller who sells flour at present value guaranteeing to the purchaser the benefit of the decline in prices until such time as the purchaser takes delivery of it, though that time may be months in the future. So far this practice has been confined to one or two concerns and so far the services of the official assignee have not been called upon. Such desperate means can only result in loss to the man who resorts to them. The puhlic being charmingly unsympathetic, forget the benefits conferred on them as soon as the miller attempts to profit hy the connections made in this illegitimate way. I have mentioned these cases to you, as illustrating the extremes to which men can go when seeking to get more trade than belongs to them. They show that competition has been carried beyond the safety line. The enlargement of existing mills and erection of new ones beyond the requirements, and the exceptional interference with the export trade, are at the bottom of this fierce competition. Evidence of improvement is appearing in many millers studying the problem of reducing their output to former dimensions by reducing expenses accordingly and by turning a deaf ear to the insinuations of time buyers.

The export trade unfortunately is at a low ebb, owing chiefly to the slaughtering in English markets of consigned flour from the United States mills, a condition incidental to, or aggravated by the financial squeeze across the border.

I look confidently for better conditions and larger trade in our flours with importing countries, in the near future, and on an ascending scale of prices, which according to all precedent cannot be far off.

The extraordinaryly low prices of this summer are due in a large measure to speculation. The law of supply and demand is a less important factor in fixing prices of grain now than it was before the days of "short" selling.

Until men are debarred by the laws of their country from selling what they do not possess, the incentive to wrecking values that has worked so disastrously on the fortunes of the farmer, the legitimate grain dealer and the miller during the past two years, will continue to be a curse to the trade. This is beyond our control or influence.

The United States can justly claim to be the birthplace and nursery and present stamping ground of the gambler in food products, against whose operations the millers of that country have long waged as vigorous a war as their disunited condition made possible.

The report of the freight committee has shown you that a large share of the unremunerated business of the year was due to underbilling. In whatever position we were to compete with that portion of the carload which paid freight, you will agree, we were entirely out of the running when we encountered that portion of the carload which had gone to Quebec or eastern points free of freight, while we had to pay the freight of 40c. to 50c. per barrel.

The Dominion Millers' Association hopes to impress on all who need it that there is truth in the adage "honesty is the best policy." We hope to make it the best and safest policy to load cars by, and when we have accomplished this, there will be less flour and offal that has paid no freight for us to compete with.

We have entered on a new year. We shall elect officers to-day to manage our affairs for us for twelve months, and I hope our choice will fall on men who will have the will and the time at their disposal to work for us, for in the year before us great things are to be done.

I hope the incoming President may be able to tell us a year hence that the work undertaken during the past year to muzzle the competition of the dishonest shipper has been carried to a successful issue.

The success of the Central Wheat Buyer's office beckons us on to a similar agency for the disposal of some part of our product.

The export trade in flour is capable of immense expansion, but in order to accomplish this we must remove anything in which we are handicapped against, first foreign millers, and second, Canadian grain exporters.

Cheaper fire insurance, the average rate paid by us is about 3 per cent. The average rate paid by British millers, on mills that are no safer risks than ours is about ¾ of one per cent. The difference is sufficient to enlist our attention.

I shall not go further on what is before us, as I have no doubt the new Executive will come to office, possessed with the importance of what there is to do. It is a matter of great pleasure to announce that all our beautiful machinery for the holding of Arbitrations has been rusting throughout the entire year. None of us has tried apparently to rob his neighbor, and so the Board of Arbitration has had a sinecure, on which we can congratulate them and each other all around.

Before closing I wish to record my appreciation of the work done by our Secretary. At the end of a year, in which I have had necessarily many opportunities of observing his methods, I attribute the splendid position of our Association, over and above all causes else, to the rare ability and disinterestedness and honorable methods of Mr. Watts.

WHEAT BUYING AND PRICES.

A discussion on wheat buying and prices was introduced by Mr. A. Wolverton, of Wolverton. It was to be regretted, he contended, that not a few millers were going back on the system of buying wheat by standard. Because wheat of the past year had been heavier than the average yield he had no doubt that millers had been losers. Yet the system was a desirable one. It had required much education to get the farmers to accept the system and he thought millers should hold by it. It would seem necessary, however, to make some changes in the tables now the vogue, and he moved, seconded by Jas. Goldie, of Guelph, "That the standard table for wheat buying be revised and that all members be urged to buy from farmers only by standard." The following is a comparison of standard, and proposed revision:

	Standard. c.	Proposed change. c.
For 64 lbs. pay more than standard price	4	—
For 63 " " " " "	3	—
For 62 " " " " "	2	2
For 61 " " " " "	1	1
For 60 " " " " "	St'd	St'd
For 59 " less " " "	1	St'd
For 58 " " " " "	2	1
For 57 " " " " "	5	3
For 56 " " " " "	8	5
For 55 " " " " "	12	8
For 54 " " " " "	16	—
For 53 " " " " "	20	—

The resolution brought forth a wide expression of opinion from members. Mr. Mulhern and others contended that no more flour was got from 63 lb. than from 61 lb. wheat, nor from 64 lb. than 62 lb. "This view," said Mr. T. O. Kemp, of the Ogilvie Company, Seaforth, "is erroneous. There was an extra value to be obtained from the heavier wheat. We need to encourage the production of the best wheat. The general opinion on the main question favored leaving the present standard undisturbed. It had been hard work to get the farmers, and grain men, where they are to-day. These had now accepted the standard table as their guide, and a renewal of hostilities in any form was not something to be sought for." It was also pointed out that wheat this year was likely to be light, and if so, after a year of heavy wheat, millers would be on the favorable side in buying. The original motion was withdrawn, and the following, on motion of Mr. John Brown, was unanimously adopted: "That this association confirm the standard as published in our year book for 1893."

REPORT OF THE CENTRAL WHEAT BUYER.

The following report was presented by the Central Wheat Buyer, Mr. C. B. Watts:

Although the past year has been one in which it has been difficult, in fact, almost impossible, for millers to do a profitable business, I am glad to be in a position to report that the patronage extended to this office during the past twelve months has been such that I am again this year in a position to report a small surplus over expenses.

During the past year 125 different mills have bought grain through this office, and nine of these millers, not being members of the association, have paid the full commission of $5 on Ontario and $6 on Manitoba wheat.

Since the office has been opened there has been in all 196 mills patronize it, including 33 mills who have bought through the office for the first time during this year. I am glad to say that of the 14 new members joining no less than 11 joined because they wished to buy wheat through this office.

I have again this year to report that a number of our mills have reported purchases not made through this office, requesting that the commission be charged to them, having felt that the existence of the office had assisted them in buying the wheat, so reported, and felt that they should pay the commission on the same. This has not been confined to the big mills only, as I received a cheque of $15 in payment of an account of $2.50 from one of our smallest mills, Messrs. Merilees & Cox, Almonte, who requested that the balance be placed to the credit of the office on account of benefits which they considered they had received; and others of the small mills have also reported a number of cars.

The following are details of purchases made during the past year: July, 64 cars Ontario, 24 cars Manitoba, and extra commission on Manitoba of $6.50, $238.50; August, 92 cars Ontario, 33 cars Manitoba, and one car peas, together with 5 cars adjusted, not bought through this office, but on which commission was paid, making with extra commissions $291.50;

September, 97 cars Ontario, 114 Manitoba, extra commissions $11.50, $490.50; November, 76 cars Ontario, 123 Manitoba, extra commissions, $7.65, $467.16; December, 28 cars Ontario, 69 Manitoba, with 1 car of shorts, $233.00; January, 16 cars Ontario, 24 Manitoba, 5 cars peas, together with extra on Manitoba and amount reported, $153.37; February, 36 cars Ontario, 62 Manitoba, 5 cars oats, 3 peas, with extra commission, $249.50; March, 53 cars Ontario, 33 Manitoba, 2 cars shorts, 10 cars oats, $227.00; April, 25 cars Ontario, 28 Manitoba, with extra on Manitoba, $124.00; May, 55 cars Ontario, 23 Manitoba, 11 oats, together with extra commission on oats, peas, and Manitoba wheat, $222.00; June, 26 Ontario, 92 Manitoba, 15 cars oats and peas, $362.67, making a total of 1,480 cars sold during the year. In addition to the above I made a profit of $25.65 on a car of Manitoba wheat sold on 'Change, and also $174.88 on 5,000 bushels of Manitoba wheat, making a total of commissions earned by this office $3,702.65, less cars refused and bad debts $44.83, leaving a net earning of $3,657.82.

The total expenditures as per the Auditor's report were $3,247.71, leaving a net profit for the year of $410.11.

I cannot refrain from drawing your attention to the number of cars which were purchased during the year at prices below which the orders were given, and which were, I might almost say, invariably the lowest quotations obtainable at the time the order was given: 99 cars were purchased at ½c. below the order, 127 at 1c., 9 at 1½c., 37 at 2c., 4 at 2½c., 18 at 3c., 1 at 3½c., 1 at 4c., 2 at 5c., 1 at 6c., making a total of 299 cars for which the miller did not have to pay as much as he expected, or as much as he would have had to pay if he had been buying anywhere else excepting through this office.

I merely mention this to show that, as a matter of fact, instead of the miller being out of the small commission which is charged by the Association for the wheat purchased, that in many instances the buyer has saved more than his total account for commissions during the year would come to, in the reduced prices obtained on wheat bought.

The report was unanimously adopted.

REPORT OF THE FREIGHT COMMITTEE.

Some of the matters dealt with by this committee during the year have been of the greatest importance to the members of the Association. The report was presented by Mr. M. McLaughlin.

The first meeting of the Committee on Sept. 6th was held on receipt of information to the effect that the Northern Pacific and Grand Trunk had abolished grinding in transit privileges.

Our representations to the Grand Trunk authorities, in person, resulted in the despatch of Mr. Earls to Chicago and St. Paul. His mission resulted in the renewal of grinding in transit privileges, which had been withdrawn.

The value of these privileges to the railways concerned, and to the millers of Ontario especially, are equally great.

Without such privileges the road looses all haulage on Manitoba wheat and the miller, unless situated on the main line of the Canadian Pacific Railway is entirely debarred from grinding Manitoba wheat, either for our eastern provinces or for export.

We also requested them to make this privilege apply to Manitoba wheat brought down by boat to Sarnia, pointing out the fact that they sometimes carry wheat at as low a rate as 7c. per bush. from Pt. Arthur via Sarnia to Montreal for export, while the railroad charged the mills 8c. west of Toronto and 9c. east, and then the local freight on the flour to Montreal.

We were unable to gain any concession in this respect, although it was intimated that if we made arrangements to bring large cargoes in our own boats to Goderich or Sarnia, some concession might be gained by making special arrangements.

We also brought up the matter of reduced rates for export, but found that nothing could be done unless we were in a position to charter a large quantity of space at one time, the same as the grain men. To do this it would be necessary for those mills doing an export flour business to make some arrangements to fill up a certain amount of space each month, when probably some such scheme could be worked to advantage.

The revelations in connection with the now notorious Carrier affair at Quebec in reference to underbilling of cars, disclosed a state of affairs requiring immediate attention. Your secretary immediately opened up correspondence with general manager Seargeant, of the Grand Trunk, and general manager Shaughnessy, of the Canadian Pacific Ry., and the Committee was called together on the 3rd June, 1893, to consider what steps could be taken to render a repetition of such transactions impossible.

The system of underbilling, such as practised on this occasion, gave the receiver in the eastern markets an advantage over his honest competitor which could not be overcome, either by improving the quality of output or cutting prices, unless prices were reduced away below the cost of manufacture.

An appointment having been made by the general manager of both our great railroads to meet at the Windsor Hotel on Saturday, 24th June, your Committee waited on them.

The attention of the general managers of the C.P.R. and G.T.R were called to the facts brought out lately in Quebec that cars were found overloaded to the extent of 50 barrels, and in some instances even 200 bags more, equivalent to 100 barrels, were in the car than it was billed at, which meant a loss to the railroad of, in the latter case, $50 in freight on one car alone. As this was equal to 20c. a barrel on an ordinary carload, it could be at once seen that no miller could fight against such competition as this, and that unless steps were at once taken by the railroads to stamp out this evil, honest millers would be compelled in self-defence to notify the railroads that they also would overload, as they could not afford to stand quietly by and see their business ruined.

Delegates mentioned that fact that they had been requested to load flour in 120 lb. bags and even in 140 lb. bags and bill it as 98 lbs., and on refusal to be parties to such a fraud, that their customers had told them, that while they respected the stand they took, that in order to do business they had to get as good terms as their competitors, and they would have to send their orders to a mill that would meet them in this respect. It was also shown that there were even greater facilities for underbilling in shipping mill offal and other feeds in bulk or mixed cars of bulk and package freight.

We asked the railroads, as one means of curing the evil, to charge all surplus weight found in a car over what the billing called for, at double the ordinary rates, or local part carload rates, and also that if it were not already provided by law, to obtain such amendments to the Railway Act, as would make both shipper and receiver, and also the railway agent, if privy thereto, subject to heavy penalties.

We also requested the railroads to supply the Secretary of your Association with the names of both the shippers and receivers, and of other particulars of cars found underbilled, so that the Asssociation would be in position to take such action as they were advised to prevent a continuance, and mitigate the evil.

Both Mr. Seargeant and Mr. Shaughnessey said the Association had their entire sympathy in this matter, and they would be glad to do all in their power to put an end to such unsatisfactory state of affairs, and would be very glad of the assistance of the Association in so doing. The loss of freight to them was a most serious item, Mr. Seargeant saying that owing to the G.T.R. having erected weigh scales at 36 points, they had, in the past, succeeded in increasing their receipts about $100,000 a year by raising the billing to the correct weights.

They did not know whether they could legally charge double rate on any amount underbilled, but if they could, would gladly do so. Mr. Seargeant mentioned that under the Interstate Law underbilling was a criminal offence punishable by imprisonment for two years and a minimum fine of $3,000, but we had no such law in Canada.

Mr. Shaughnessey called our attention to the fact that not alone did they lose their freight, but a car might be wrecked by being overloaded and thereby cause a loss of many thousands of dollars, and endanger the lives of their employees, which was a more serious aspect of the case than mere monetary loss, from which they were suffering.

He said he would advise your Secretary of those guilty of underbilling, as requested by the deputation and would take the other steps suggested hy us, if it was found they could legally do so, and if not they would join with the G.T.R. in seeking such amendments to the Railway Act, at the next session, as would enable them to inflict heavy penalties on all concerned in attempting to defraud the railways by underbilling.

In any event a joint circular would be issued at once by the two roads, instructing their agents, both at shipping and receiving stations, to take every means possible to check both the number and weight of packages contained in cars, and that all carloads containing either bulk freight or mixed bulk and package freight would be weighed, and in event of any doubt existing in the mind of the receiving agent as to the correct weight, he would be instructed to see the invoice before delivering the goods, as suggested by the deputation.

We may say that the railroads have since issued two circulars bearing on this subject, the first one not being exactly in accord with our views, the second one was issued.

We would recommend that at this meeting the association pass resolutions pledging every member to do everything in his power to assist the railroads in wiping out this dishonest system of underbilling, and also resolutions asking the railroads to procure amendments, at the coming session of Parliament, to the railway Act, similar to those existing in the Interstate Law on the other side of the line, and also permitting them to charge local part carload rates on all surplus found in the car above what the shipping bill called for.

Some plain talking was indulged in regarding the clause of the report on underbilling. Treasurer Wm. Galbraith remarked that few members were aware of the extent of this evil. Millers themselves were not altogether guiltless. Of course no member of the Dominion Millers' Association would be guilty of such practices. As much as 200 barrels of flour had been billed short in one shipment. A case was instanced where the actual shipment consisted of 500 barrels, and the freight bill called for only 306 barrels. It was impossible for an honest dealer to do business in the face of such corrupt methods. J. D. Saunby said that the trouble was not confined to the Grand Trunk and Canadian Pacific. Millers in the west had had a similar experience in shipments over the Michigan Central Chas. Smith, Campbellford, held that it was not the place for millers to concern themselves about underbilling. The matter was one that belonged to the railways. If new legislation was necessary let them ask for it. J. L. Spink said that this matter must concern the honest miller. The notorious Carrier case was in point. Who could do business successfully if such methods were to be allowed to prevail? It was remarked by one member, and the statement elicited considerable applause, that these were practices that were not unknown to the railway companies. Underbilling was not done without them knowing of it. The whole matter was summed up in the three resolutions which follow, and which received very general approval.

In view of the recent revelations of the underbilling of flour, etc., and the carrying of large quantities of flour and mill offal free of freight this general meeting of the Dominion Millers' Association desires to urge on the Canada Pacific, Grand Trunk and Michigan Central the necessity of having an act passed at the next session of Parliament containing provisions similar to those contained in the Interstate Law making underbilling a criminal offence and inflicting a penalty on both shipper and receiver and also the railway agent, if privy thereto, of both a fine and imprisonment and that a copy of the above be forwarded to the general managers of the three roads.

Moved by T. O. Kemp, seconded by Robt. Noble, that the Executive Committee be, and is hereby instructed, to take such steps as are necessary, provided the railways do not do so, to have the railway act amended as to compel railways to charge all overweight found in cars at local part carload rates. Also to make underbilling a criminal offence, those found guilty punishable in manner similar to the Interstate Law in the United States.

Moved by Joshua Howard, seconded by Fred. Rollins, that the members of this association in general annual meeting assembled hereby pledge themselves to assist railways by every means in their power to prevent the underbilling of grain and flour and also to assist them in procuring legislation that will make such fraudulent practices a criminal offence.

UNRELIABLE DEALERS AND BROKERS.

Mr. W. H. Meldrum, of Peterboro', opened a discussion on the adoption of a system of reports of unreliable dealers and brokers. Some method was needed to protect the miller against the man who did business for the one purpose of fraud. If some practicable method had been in vogue before this, Carrier, of Quebec, would not have been successful in getting hold of, and getting away, with $30,000 of other people's money. Mr. J. Stark, of Paisley, said that if members followed the advice of the President, given in his address, and sell for cash only, there would be no occasion for the mercantile bureau proposed. Mr. J. L. Spink replied that selling for cash would not cover the ground. Suppose you make a shipment and attach draft to bill of lading and your customer will not accept. You write and re-write and he pays no attention to your letters. In the meantime prices have declined. Finally a proposition comes to you to accept the shipment if certain very liberal discounts are made. The goods are down in the Maritime provinces, perhaps, and it means expense to bring them back, and to make the best of a bad job one lets the shipment go at a loss. We need some machinery to meet cases of this kind. Secretary Watts explained that he had been in correspondence with the Secretary of the Michigan Millers' Association, who had furnished him with the blank forms used by their members, and had quite fully explained the methods employed. He believed the same plan could be followed with success in Canada. Mr. W. H. Meldrum closed the discussion by moving the following resolution:

That the executive committee be empowered to formulate a scheme similar to the State millers' association, of Michigan, with such amendments as they in their own judgment think will be for the protection and profit of our members. That a confidential circular be issued at stated intervals to all members of the association giving such information as will enable our members to shun unreliable and dishonest dealers. Carried.

TERMS OF TRADE.

Mr. J. L. Spink introduced a resolution favoring the adoption of the "Terms of Trade" as printed in the by-laws of the association. These were read by the Secretary, and so far as necessary, explanations were made by Mr. Spink. The resolution was seconded by Mr. J. D. Flavelle, and reads: "That the terms of trade, as read and copied into the by-laws of the association, be and are hereby ratified and confirmed as the terms of trade of this association." Carried.

EVENING SESSION.

At 8.15 p. m. President McLaughlin called the members to order for business.

BUYER AND SELLER.

Mr. A. H. Baird, of Paris, led off in a discussion as to the relations of buyer and seller to one another. Every miller had met the man who refused to accept flour at the time ordered for delivery. What this meant to the miller was understood by everyone present. To meet the difficulty Mr. Baird moved, seconded by W. H. Meldrum:

That all sales of flour shall be made for shipment within 15 days from the date of sale unless otherwise specified in order as entered at the time of sale and that a charge of 5 cents a barrel for each month or fraction thereof shall be made until order for shipment shall be given by the purchaser.

Mr. Hugh N. Baird, ex-president of the Toronto Board of Trade, said the resolution would accomplish nothing. It was simply a question of markets. When the market was going down the buyer will be ready to wait two or three weeks. On a rising market he will be anxious to have his stock delivered.

The resolution was withdrawn.

TO LICENSE THE MILLER.

Not a little merriment was caused by a notice of motion made by Chas. Smith, of Campbellford, that the Executive be instructed to have inserted in the Act of Incorporation a clause making it necessary that before any man should engage in milling that he be compelled to take out a license to do so. Mr. Smith was in dead earnest. If others took the resolution as a joke, he did not mean it to be so. There were too many stone millers, choppers and small grist millers in the country. No encouragement was given to the legitimate miller to push his business. Mr. J. L. Spink was disposed to laugh the matter out of court. One might just as well make it compulsory, he said, that a farmer must have a license before he can plant an acre of corn. The president reminded the members that a notice of motion was not open to debate. Here discussion ended. The terms of the proposed resolution are as follows:

That this association thinks it advisable to ask Parliament to pass an act giving this association power to license all millers doing business in Ontario (or the Dominion), for the purpose of bringing all millers in and under the jurisdiction of this association as millers, and that the Executive Committee formulate rules, regulations and fees as they may think beneficial for the best interests of the association; the license fees for 100 barrel mills, or less, not to be less that $10 and not more than $15, larger mills to be in proportion; the said license fees to pay the expenses of the association, and that all expenses being paid, all surplus moneys be refunded to the individual members pro rata as to what they have already paid into the association.

A FLOUR SELLER.

The success of the Central Wheat Buyer's office has given rise to the suggestion with more than one miller

that it would be to the profit of the trade to have a flour seller located at say Montreal, who would handle the business of the miller with the Maritime Provinces and foreign ports.

Mr. J. G. Bechtel, of Burford, who has given much thought to the question, moved, seconded by John Brown, the following resolution, "That a committee be appointed to take into consideration the advisability of appointing an association agent in Montreal or some other eastern point, and that this committee report to the Executive Committee at the earliest date possible, and that the Executive Committee call a special meeting of the association on receipt of that report if they deem it advisable to do so."

In introducing the motion the mover spoke of the trouble that the exporter frequently met with in doing business in the Maritime Provinces and elsewhere. Some of these difficulties had been referred to in the discussion of questions at this meeting. He believed they would be largely overcome if an agent representing the association were placed at a central point to act for the miller. This view was joined in by other members of the association, and the president appointed the following committee to carry out the terms of the resolution, which was unanimously carried. Committee: J. G. Bechtel, Burford; G. H. Harper, Dundas; R. Noble, Norval; J. Brown, Toronto; and R. T. Brown, Welland.

COMPETITION IN FLOUR SELLING.

The subject of competition in flour selling was introduced by Mr. M. McLaughlin. Everyone regretted the keen competition that existed to-day; everyone felt the competition; the puzzling question is, where is the remedy? Mills are over-producing, and new mills are constantly being erected, that further aggravated the evil. J. L. Spink said there would always be competition in flour selling so long as there was competition in the manufacture of flour. Here was the seat of the trouble. We must stop manufacturing more flour than we can sell. Mr. Spink said he had himself followed this rule and he could say that he had made some money during the past year. For the first six months of the year he had run his mill regularly each day; during the second six months he only run perhaps one or two weeks in the month. He made it a rule to get in all cases at least the cost of manufacture, which he figured at 35 cents a bbl. Harold Barrett, of Pt. Hope, said he had acted on the same principle as Mr. Spink, and could say with him that he had made money during the year. N. H. Stevens, of Chatham, dwelt with much force on the opening that existed in the West Indies and Newfoundland for Canadian flour. He had been shipping flour in considerable quantities to these points as also to the Maritime Provinces. Detroit millers were sending flour to Newfoundland, and with greater advantages in their favor, why did not Canadian millers make a larger bid for these markets? The remedy to competition in flour selling was to be found in an extension of our markets, and the Dominion Millers' Association would do a good work in giving careful thought to this matter. R. Noble, of Norval, thought we had advantages in grinding flour in this country that should enable us to find a good market for our product in Great Britain. A mistake millers often made was in running prices up on wheat. J. Stark, of Paisley, reminded Canadian millers that millers in Great Britain to-day were as well able to produce first-class flour as those on this side of the Atlantic. Their mills were all equipped on the most modern plans.

ELECTION OF OFFICERS.

The election of officers which was taken up about 9.30 p. m., resulted as follows:

President—A. H. Baird, Paris, elected by acclamation.

First Vice-President—Harold Barrett, Port Hope.

Second Vice-President—A. Wolverton, Wolverton, by acclamation.

Treasurer—Wm. Galbraith, Toronto, by acclamation.

Representative on Toronto Industrial Exhibition Board—J. L. Spink.

Executive Committee—M. McLaughlin, J. L. Spink, Toronto; Jas. Goldie, Guelph; J. D. Flavelle, Lindsay; J. D. Saunby, London; W. H. Meldrum, Peterboro'; J. Galbraith, Allandale.

Board of Arbitration—James Stark, R. A. Thompson, W. S. Snider, George H. Harper, A. Plewes, J. G. Bechtel and G. S. Baldwin.

On motion of Jno. Brown, the Secretary was instructed to write to the Secretary of the Industrial Exhibition Board, and ask for a larger representation of the association on that Board.

At 10.45 the work of the association was brought to a close.

THE JOLLY MILLER'S OUTING.

The miller's little boys and girls
Are glad to see the snow;
Good father play with us to-day;
You cannot work, you know.

We will be the mill-stones,
And you shall be the wheel;
We'll pelt each other with the snow,
And it shall be the meal.

The words of the poet hardly describe the position of the miller in a mid-summer's day with the thermometer well up into the nineties. His mood, however, at 7 o'clock on Thursday morning the 10th inst, when with wife or sweetheart he took ship on the beautiful steamer Chippewa, for Niagara Falls, was none the less happy and joyful. The idea of an excursion to the Falls to round up the work of the convention was one that took like fun with the association and there were few members present who did not take it in. Dull care was for the nonce cast aside; the markets were perhaps all right, more likely they were all wrong; the miller had left the worry and dust of the mill behind him, and was determined on drinking in the invigorating breezes of lake Ontario.

Providence favored the miller; the weather was delightful; there was not a white cap in sight, and whether going or coming the sail was most enjoyable. Arriving at Queenston at 9.15 cars of the new electric railway were in waiting and here was in some respects the pleasantest part of the trip. The new railway, with its open and observation cars, runs along the bank of the river from Queenston to Niagara Falls, stopping at Brock's monument, the whirpool rapids, the old and new suspension bridge, and other points of interest, giving as it nears the Falls a grand view of this wonderful phenomena of nature.

The party reached the Falls at noon, where dinner was provided shortly afterwards at the Dreyer House. This part of the programme completed, the rest of the afternoon, until it became necessary to take the train for home, was spent in viewing Goat Island, Cave of the Winds, braving a trip on the Maid of the Mist, and taking in the sights generally.

The Chippewa reached Toronto again at 8.30 p.m., bringing the larger number of the party back, the others returned on the Chicora at 9.30.

Everyone voted the trip a success and have already declared that the scheme must be made a fixture of future annual meetings.

ASSOCIATION TIT-BITS.

Members lost an opportunity for a profitable discussion in saying so little on the subject of "Competition in flour" in the program of the evening session.

The September CANADIAN MILLER will contain portrait and character sketch of Mr. A. H. Baird, of Paris, the newly-elected president of the Dominion Millers' Association.

Mr. Hugh N. Baird, the popular ex-president of the Toronto Board of Trade, seldom fails to put in an appearance at the annual meeting, and usually has something worth while to say.

"A complete success" was the laconic, but emphatically exact, language in which a member described Mr. C. B. Watts' excellent management of the Central Wheat Buyer's office.

The two veterans of Canadian milling, Mr. James Goldie, of Guelph, and his brother, Mr. David Goldie, of Ayr, saw the Convention through from start to finish, not omitting the delightful trip to the Falls.

As well Shakespeare without Hamlet as a millers' meeting minus the genial and benignant countenance of J. D. Saunby, of London. He was again re-elected to the executive as everyone knew he would be.

Mr. Harold Barrett, of Port Hope, and Mr. A. Wolverton, of Wolverton, are capable men for the positions of first and second vice-presidents for the new year. They are both new men on the executive. Another new and valuable addition to the executive is Mr. John Galbraith, of Allendale.

Mr. C. B. Watts, secretary, runs this association, said retiring president McLaughlin, and he runs it well. Give him credit for the high position we hold as a commercial association to-day. The sentiment was unanimously echoed by all present.

No one would dream of standing in opposition to Mr. Wm. Galbraith for the position of treasurer. He is a round man in a round hole—fitting the position exactly; his election by acclamation was one of the things everyone rightly took for granted. He shared with the president the honors of a unanimous standing vote of thanks.

Two extremes meet at every large public gathering (a) the man who talks too much and prejudices his opportunities of advancement, (b) the man, who talks too little, and, because unknown, is kept in the back ground where his talents merit a front position. Both classes had their representatives at the Millers' Convention.

With this meeting of the Association, Mr. E. S. Edmondson, of Oshawa, ex-vice-President, retires from milling. His mill was destroyed by fire during the past year, and having since embarked largely in the baking business, and also holding the contract for the lighting of his town by electricity, he will not, at present, at any rate, return to milling.

The R. G. Dunn Co. and Bradstreet's Mercantile Agency reports don't count for much with Canadian millers if the remarks of Mr. W. H. Meldrum, of Peterboro', are to be taken as anyways expressive of the general sentiment. All felt in any case that there was need for a better system of reports to secure protection against the scallywag flour handler.

It was his first appearance at an annual meeting of the Dominion Millers' Association, but this did not prevent Mr. N. H. Stevens, the big miller, of Chatham, from being quickly spotted as a desirable acquisition to the membership. His remarks on the possibilities of a Canadian flour trade with Newfoundland and the West Indies were declared by an old miller as among the best utterances of the Convention.

The standing vote of thanks, unanimous to a man, tendered to the retiring president, Mr. M. McLaughlin, could not have been better earned by any member of the association. Mr. McLaughlin was untiring in his efforts to advance the association, and for so busy a a man, gave his time, without stint, to the work. Moreover, Mr. McLaughlin is a brainy man, and the association profited in many ways by the careful thought he gave to all matters coming before him.

Over-satisfaction with the way business is managed is sometimes a serious blunder made by many organizations. The best managed institutions are all the better for a little criticism. "About the only fault I had to find with the recent meeting" said a leading officer the next day, "was the easy going way in which a large majority of the members took everything. Of course we had a splendid meeting and affairs have been well managed during the year, but I would rather that there had been a more general discussion of the reports and other matters before the Convention."

MILLERS AND THE CROPS.

Visiting millers talked freely of crop prospects in their several localities. The crop as a whole will be less than last year's, which, of course, was a very fine crop. Fall wheat almost generally will run lighter than that of a year ago. In the western and midland counties the crop is perhaps rather better than in some other parts of the province. Dry weather has operated against spring wheat in the west, whilst in the northerly sections it is looking well. The prospects for oats, barley and peas are not particularly promising. Hay everywhere is abundant. "The average yield of wheat in Waterloo county," said Mr. David Goldie, of Ayr, "will be from 16 to 18 bushels per acre. Last year the average was 28 bushels." President A. H. Baird, of Paris, speaking for Brant county, said "quantity and quality is inferior to that of last year. Considerable of the wheat is underweight, running from 58 to 60 pounds, while a little is over-weight." Mr. Jas. Goldie, of Guelph, was of the opinion "that fall wheat was not nearly as good an average as last year. Much is rusted badly."

LINING UP AN ENGINE.

By Robert Grimshaw in Milling.

THERE are few things which show the care and ability of an engineer or of a machinist more than this matter of lining up. Some call to mind the old proverb that every hair of a carpenter's head is an eighth of an inch in diameter, owing to the fact that the average carpenter will work to an eighth of an inch where almost every other mechanic would work to a hair's breadth. Others seem to appreciate the fact that a very slight variation at the cylinder end of the engine may amount to a great deal at the crank pin.

The first thing to do is to see that the foundation is level and firm; second that the engine bed is as nearly level as is practical to get at with the aid of levels and sighting strips. The bed must be leveled, both lengthwise and crosswise. If it is so in these two directions it will be in every diagonal direction also. The longer the level used, the more accurate the result that can be got. For cross-leveling, where there is not a chance to use a long level, the sighting strips will often come in very handy. They are simply long and absolutely straight and parallel strips of wood (preferably cherry) of equal width and used in pairs. Being laid crosswise on the engine on the guides, at opposite ends, as far apart as possible, and one of them being shown to be perfectly horizontal by the application of the level, the other should sight fair with it at both ends. A very slight twist will bring one end or the other, or both, of one of the strips, out of line with the other.

The circularity and parallelism of the cylinder bore having been proved by a piece of stout wire, pointed at both ends, and just as long as the diameter of the bore, the cylinder must be shown to be level, if it is a horizontal engine (and we are talking now only of horizontal engines), by the application of the level. The truth of the flanges may be tested by a steel square and the level; this is desirable in those cases where the guides are on a distance-piece bolted to the cylinder. The flange faces may be plumb, yet skew horizontally with the cylinder-bore; this cannot be shown by the plumb, square or level; and either of these faults is a most serious one, which does not happen once in a hundred times, but which, when it is found to be the case, gives so much trouble at first and afterwards as to call for being remedied by the builders—that is, in those cases where the guides are bolted to the flanges, or the cylinder bolted as in the Porter (so-called tangye) pattern. The guides may be tested for level by the level. If they are level and the cylinder-bore is circular, parallel and level, the guides, if level lengthwise and crosswise, will be parallel with the cylinder axis and at right angles with the cylinder-flanges. If the guides are higher at one end than at the other, it will be shown by the level. If they are askew, that may be shown by the sighting strips.

To be sure that the guides are in line with the cylinder-bore there are two ways, one to be sure that they are square with the face of the flange which bolts to the cylinder and which constitutes one cylinder head. If the cylinder flanges are square with the bore and the guides are square with the face of the head, then the guides will be parallel with the cylinder bore.

Where this distance-piece construction is not followed, the guides will have to be lined with the cylinder-bore by a cord passing through the centre of the bore, being there held at the rear or "out" end by a strip wedged into the bore, and passing at the other end of the bore through a spider made of metal for the purpose, or of wood for the special occasion, this line being prolonged as far as possible beyond the crank.

If the shaft when laid in its bearings is higher at one end than at the other, that may usually be shown by the level, or by a plumb held against the crank web or disk—this last, however, assuming that the crank is truly at right angles with the shaft centre. If the shaft is no higher at one end than at the other, but is out of square with the cylinder-bore in a horizontal plane, that may be shown (assuming that the crank is at right angles with the shaft) by applying a sighting-strip horizontally to the face of the crank web or disk and sighting a point at a known distance from the cylinder-bore; this being determined by T-squares from the centre-cord. The crank-pin will show, by being further from the centre line when on one of the dead centres than on the other, whether or not the crank is at right angles crosswise to the cylinder-bore in the horizontal plane. The shaft-bearings can be tested independently of the shaft, with the latter removed, by drawing a cord through the centres. The piston-head must be made exactly central with the cylinder-bore, and the cross-head made at the proper height with the latter, and also square with it and with the guides.

To recapitulate: The following are the points to which suspicion must be directed and where correction must be removed for them if they are not found correct:

Cylinder-bore—Level.

Front Cylinder Flanges—Plumb and at right angles with the cylinder-bore.

Guides—Level lengthwise and crosswise; parallel with the cylinder-bore; at right angles to the cylinder-bore; at right angles to the cylinder flange.

Crank—Level; at right angles with the cylinder-bore; at the same height with the cylinder-bore.

Piston—Central with the cylinder-bore.

Crosshead—Central with the cylinder-bore, at right angles throughout, and at the proper height.

BOILERS.

THE causes of deterioration in boilers is varied. In some districts, the feed-water contains an excessive quantity of salt, or of acid or it is taken from copper mines or artesian wells. All these are detrimental to the good condition of a boiler. The feed-water should be the best obtainable, and many explosions have been caused by negligence in this respect. Boilers should never be set in damp places, for external corrosion is injurious. The introduction of a fresh supply of water is, owing to the rapid generation of gases and the sudden excess of pressure, another fruitful cause of explosions. For the same reason an explosion sometimes takes place when the engineer, discovering low water, raises the safety-valve and starts the engine; it relieves the pressure of steam, causes the water to rise and strike the heated parts, and steam in consequence is heated over-quickly.

It would materially decrease the risk of explosions if the following points were always observed:

There should at all times be a sufficient quantity of water.

There should never be a higher pressure of steam than can be helped; the pressure allowed by the inspector should under no circumstances be exceeded.

The boiler should be allowed to cool down before being refilled.

Before starting the fire, it is well to try the water gauges and to see that the water is at proper level in the glass gauge.

Glass gauges and gauge cocks should be kept in perfect order; the openings should never be allowed to stop up. Otherwise, owing to the quantity of scale and sediment, one is apt to be deceived as to the real water-level.

The safety-valve should be kept in perfect working order, be lifted and oiled at short intervals, to prevent corrosion, and occasionally it should be ground in.

If the steam gauge and safety valve are found not to correspond, the former should be tested, and if defective, repaid without delay.

The steam gauge should not be exposed to much heat. The pipe should be so arranged that the condensed water will act on the gauge and not the steam direct. There should be a small cock to prevent the freezing of condensed water in cold weather.

The boiler should be cleaned often, and after each cleaning, it should be examined internally so that any defectiveness in the braces, fire-box, crown-sheet, or other part should be discovered and rectified at once.

Water should not be put into a boiler at low temperature. It is best to use feed water heaters or injectors, which, in the long run, are economical, and add to the boiler's lease of life. The feed-pumps should be kept in good order.

A stop-valve should be put between the check-valve and the boiler, so that the former may be easily examined at any time.

Finally, the best safeguard against the risk of an explosion is to take great care in keeping every part of the boiler thoroughly clean and in good working order.

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THE NEWS.

CANADA.

—A flour mill is being erected at Washburn, Ont., by McBroom Bros.

—The old mill of the Hudson Bay Co., at Emerson, Man., is offered for sale.

—Adolph Turner, flour and feed, St. Boniface, Man. Sold out to N. Houde.

—Work on the new flour mill at Melita, Man., is being pushed ahead with vigor.

—The Geo. H. Harper Milling and Seed Co. has been incorporated at Dundas, Ont.

—Thomas Stinson & Sons, millers, Minden, Ont., are successors to Workman, Stinson & Co.

—The death is announced of James A. Anderson, dealer in flour and feed, Hastings, Ont.

—E. L. Drewry, a brewer, Winnipeg, Man., is considering the erection of a 30,000 bushel elevator.

—The grain warehouse belonging to M. Knoxon, at Wapella, N.W.T., was burned on 1st inst.

—Work on the new oatmeal mill of Dow & Curry, Pilot Mound, Man., is being pushed ahead with vigor.

—John J. Brown, grain buyer, of Barrie, Ont., has assigned to O. H. Lyon, of the same place.

—An elevator with a capacity of 25,000 bushels is to be built at Rosebank, Man., on the N.P.R.

—The oatmeal and flour mills of Cook Bros., Hensall, Ont., are undergoing extensive repairs and alterations.

—A branch of the Wingham, Ont,, flour mill, has been opened at Moncton, N.B. M. A. Hutton is manager.

—The mill of Joseph Woodruff, at Killarney, Man., is to be improved and an elevator in connection therewith built.

—New fall wheat is being marketed at points in Western Ontario. Millers are paying from 57 to 58 cents per bushel.

—The Lake of the Woods Milling company are planning for the building of a mill on an extensive scale at Winnipeg, Man.

—The by-law to grant $6,000 toward the building of a flour mill at Nesbit, Man., was defeated by a considerable majority.

—There will be no wharfage charges in Jamaica on through goods shipped on inland points via Halifax and Pickford & Black steamers.

—Herron & Balderson, Perth, Ont., have dissolved partnership. Mr. Robert Balderson will continue running the grist mill under his own name.

—A son of Dr. R. J. Wood, of Streetsville, Ont., while playing with a number of other boys on top of a load of grain at Dracass' mill, fell and broke his leg.

—Wesley Bunting, of Adelaide, Ont., while feeding a threshing machine had his hand caught in the cylinder, making it necessary to amputate the hand at the wrist.

—In Enniskillen and Dawn Townships, Lambton Co., Ont., much standing wheat has been destroyed by fire which caught from timber burning in the swamps.

—The new machinery for the Peterboro Milling Company's new mills which is being manufactured by Wm. & J. G. Greey is nearly all placed in position. Capacity of the mill will be 500 barrels per day.

—The Northern Pacific Railway company has offered to give $500 towards the construction of a traffic bridge across the Souir river at Wawanesa, Man., providing the proposed flour mill is built there.

—The grist mill at Exeter, Ont., of Messrs. Rollins & Williams is to be ready for operation immediately after harvest this year. The Bobier Produce Company in the same place have moved into a new building.

—Advices from Somerset, Man., says barley was cut there on July 31 on the farm of Benjamin Foster. Crops were never better and wheat will be cut in another week.

—S. A. McGaw, manager of the Lake of the Woods Milling Company, Winnipeg, says on his return from a western trip that the harvest in many quarters will be on immediately.

—The sheriff is in possession of the property of the Buse Milling Co., at Vancouver, B.C. Within a year about a dozen judgments and a chattel mortgage for $26,000 has been recorded against the concern.

—The business of S. J. Sutherland, James Innes, sen., and James Innes, jun., of Chatham, Ont., manufacturers of coopers' supplies, will now be known under the firm name of Sutherland, Innes & Co., Ltd., with a capital of $500,000.

—The Kingston and Montreal Forwarding company has had over 4,000,000 bushels of grain to tranship so far this season. This exceeds last season's entire work by over 1,000,000 bushels already. The company has at present 200,000 bushels of grain stored at Ogdensburg, while the Montreal Transportation company has about 700,000 bushels there.

—The department of the interior at Ottawa has been notified that Immigration Agent Crossthwaite has left the Sault with a party of thirty-five farm delegates selected from different points in Michigan, to visit Manitoba and the Territories and report their observations. Agent Williams, of the interior department, has also left the Sault with a party of forty-five settlers from Michigan for Manitoba.

—The fine 100-barrel roller mill owned by Way & Co., and operated by S. Summerfeldt, at Pefferlaw, Ont., was burned a fortnight ago. The mill was one of the pioneer mills of this northern country, having been built by the late Capt. Johnston, R.N., in 1844. Messrs. Way & Co. lose on the building $12,000, with an insurance of $5,000 divided between the Gore District Mutual and the Waterloo. Mr. Summerfeldt also has an insurance of $500 on contents. The origin of the fire is unknown.

—Head & Bossons, of Portage la Prairie, Man., elevator contractors, have at present under construction, the following elevators:

	Capacity Bushels.
Cypress River	30,000
Baldur	30,000
Indian Head	30,000
Kemnay	40,000
Bagot	20,000
Carduff	30,000
Sintaluta	30,000
Total capacity	210,000

—The annual report of Grain Inspector Horne, of Winnipeg, has been prepared. The amount of grain inspected at this place during the year ended July 31, was as follows:

	Bushels.
Nos. 1 and 2 hard	3,426,150
No. 3 hard	1,125,150
Northern grades	557,050
White Fyfe	108,550
Frosted	604,500
Rejected, smutted, no grade, etc.	1,407,250
Total	7,228,650

The percentages are as follows: Hard grades, 63; northern grades, 8; white fyfe, 1½; frosted, 8½; rejected, etc., 19½ per cent. This only includes wheat inspected at Winnipeg, a portion of the crop went to Fort William for inspection.

GENERAL.

—A despatch from St. Paul says that estimates have been placed on this years' wheat crop for Minnesota, North and South Dakota, making the yield 70,000,000 bushels, one-third less than last year.

—The Magnolia Metal Company, which sells its metal all over the world, extends to its friends an invitation to visit its exhibit at the World's Fair; it can be found at Section No. 10, Column No. E—53, where all people who are interested in the running of machinery with the least amount of friction are welcome.

PERSONAL.

Mr. Wm. Jago, F.C.S., F.I.C., the English chemist and specialist, who will be in this country during the present month to make an inspection of Canadian and United States flour, is not an entire stranger to the country. He visited Canada about six years ago taking a trip to the Northwest for the purpose of personally inspecting the wheat growing districts of that section of the Dominion. He will on his return read a paper before the British Society of Arts on "Six Years Development of Northwest Canada."

A GREAT GROUP OF MILLS.

Mr. W. W. Ogilvie has issued a trade circular announcing the completion of the work of remodelling his group of mills with the latest improved machinery. The capacity of the Ogilvie mills is now 8,200 barrels of flour a day. They consume some 10,000,000 bushels of wheat a year and have as feeders a chain of elevators, forty-two in number, in the Canadian northwest, the hard wheat of which region is used exclusively by the mills, which is no doubt, a main contributing element in the success the Ogilvie flours have attained on the markets of the world.

THE TORONTO INDUSTRIAL.

Next month, for ten days, commencing September 4, the Toronto Industrial Exhibition will be in full swing. Recently Manager Hill has visited the World's Fair and various American cities, and has bagged the strongest attractions to be found on the continent. The industrial, mechanical and agricultural departments will be largely augmented this year. Altogether a very special effort is being put forth to make the exhibition vastly superior to anything hitherto attempted by the Toronto Industrial. It is to the credit of President Withrow and his associate directors to say that they do not attempt anything without success.

A CANADIAN IN THE WEST INDIES.

RECENTLY the wife and son of Mr. Robt. Noble, of Norval, Ont., a well-known Canadian miller, spent a pleasant holiday in the West Indies and British Guiana. "To the manner born," the younger Noble made a careful study of trade conditions while away. He thinks there are fair prospects there for Canadian flour, but cautions millers to be careful about the quality and packages. Mr. Noble says: "The people over there want the same kind of barrel they have been accustomed to from the United States, viz., well-seasoned oak staves, hardwood heading and half-round hoops. They are very much prejudiced in their own ideas, and I think it would be better to give them something they are pleased with rather than try to introduce something they know nothing about. Many business men in different ports of call, especially Bermuda, St. Kitts, Montserrat, Dominica and St. Lucia were found anxious to encourage a Canadian trade and waiting for Canadians to co-operate with them."

HOW TO OBTAIN DRY STEAM.

WHEN putting up a steam pipe between boiler and engine, says the Stationary Engineer, it should be made to slope slightly toward the engine, so that all the water and condensed steam will be carried forward, as it cannot be made to run back against the flow of steam; for water once in the pipe must flow forward, and if no outlet is provided it must travel through the cylinder of the engine. The water can be kept from the engine by putting a separator or water catcher in the horizontal pipe near the last end before it reaches the engine. A small pipe will lead from this back to the boiler, trapping the water before it reaches the cylinder.

By the use of this simple arrangement, the steam supplied to the cylinder will be much dryer and give better results in doing the work; it will also remove the injury to the engine on account of entrained water. The pipe leading back to the boiler need not be larger than ¾ or 1 inch for engines of 100-horse power or less. If a water glass forms a portion of the return pipe it will show that a surprising amount of water is returned from the steam pipe to the boiler, the water would otherwise have gone through the cylinder, requiring a greater amount of lubrication, assisting or causing leaks, and presenting a possibility of great danger to the engine. In boiler tests, the steam which is condensed in the pipe and the water carried off by priming, is often credited to the coal, when a large portion of it is due to priming effects.

The condensation of steam in the steam pipe is much greater than is generally supposed, and is always so much that great economy in fuel would be obtained if the pipes were covered with some good non-conducting substance. The different forms of separators employed in steam pipes serve an excellent purpose in providing dry steam only to the engine, but if the steampipes were well covered, the work required of the separator would be reduced, in many cases, much more than one-half.

TO MILLERS

FOR SALE. "NATIONAL ROLLER MILLS," Brussels, Ont. Capacity 100 barrels per day. Cheap, easy terms of payment. Address "B. C.", P. O. Box 566, Toronto.

GRIST MILL FOR SALE

WATER POWER THREE SET MILL, NEW; satisfactory reasons for selling; also small fruit farm.

JNO. P. WEEKS,
Hornings Mills, Ont.

MILLERS' & MANUFACTURERS' INS. CO.

ESTABLISHED - 1885

32 Church Street, Toronto

The President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said: I have much pleasure in drawing your attention to the fact that this company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

Up to the present time the insurers with this company have made a saving, when compared with the curreent exacted rates, of $91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to $21,522.72.

Besides achieving such result, we now also have, over all liabilities—including a re-insurance reserved (based on the Government standard of 50 per cent.—(50%), a cash surplus of 1.93 per cent. to the amount of risk in force.

Such results emphasize more strongly than any words I could add the very gratifying position this company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report.

The report was adopted, and the retiring Directors unanimously re-elected. The Board of Directors is now constituted as follows: James Goldie, Guelph, president; W. H. Howland, Toronto, vice-president; H. N. Baird, Toronto; Wm. Bell, Guelph; Hugh McCulloch, Galt: S. Neelon, St. Catharines George Pattinson, Preston; W. H. Story, Acton; J. L. Spink, Toronto; A. Watts, Brantford; W. Wilson, Toronto.

HUGH SCOTT, Mgr. and Sec'y. THOS. WALMSLEY, Treasurer.

FLOUR, GRAIN AND COMMISSION MERCHANTS AND BROKERS

The Canadian Miller will not knowingly publish the cards of irresponsible parties. So far as we know, the following firms are thoroughly reliable.

THOMAS McLAUGHLIN

FLOUR and GRAIN

DEALER

BOARD OF TRADE BUILDING

TORONTO

EASTERN AGENCY:

50 St. Paul Street

QUEBEC

G. K. MORROW, MANAGER.

C. GOODE

GRAIN and COMMISSION Merchant

ONTARIO AND MANITOBA WHEATS IN CAR LOTS

Consignments promptly attended to

62 FRONT STREET EAST

TORONTO

ESTABLISHED 1859

WM. GALBRAITH

Commission Merchant

Flour and Grain

48 Front Street E.

TORONTO

J. F. McLaughlin

FLOUR, GRAIN MILLFEED

WHOLESALE

Send large samples and quote prices . . . .

MANITOBA WHEAT FOR SALE

Rooms 511 and 512 Board of Trade

. . Toronto

STARK BROS. & CO.

BOARD OF TRADE BUILDING

. . TORONTO . .

GRAIN DEALERS

Specialties:

MANITOBA WHEAT

MILLFEED

AND COARSE GRAINS

Peer & Company

Flour and Grain Merchants

BOARD OF TRADE BUILDING

TORONTO

LAWRENCE COFFEE THOMAS FLYNN

ESTABLISHED 1845

L. Coffee & Co.

Grain and Commission Merchants

38 Church Street

TORONTO

Cooperage Stock

If you want **Staves, Hoops, Heading or Liners**

For Flour Barrels, Meal Barrels, Apple Barrels, Salt Barrels, Bean Barrels ..... or any other kind of Barrels, write to .....

.... THEY MAKE THE BEST STOCK ....

SUTHERLAND, INNES & CO., CHATHAM, ONT.

WANTED AND FOR SALE

TO MILLERS AND GRAIN EXPORTERS.—Advertiser wishes to represent a good miller or grain merchant in the London market on commission; references exchanged. J. H. BAILEY, Sr., Brentford, London, England.

GRIST MILL FOR SALE

STONE PROCESS; DOING A FAIR BUSINESS; ample water power. Will be sold cheap. For particulars apply to

G. M. SHEPLEY, Falkirk, Ont.

MACHINERY FOR SALE

FOR SALE, ONE DOUBLE SET OF ROLLS 7 x 14, one bedstone 4 ft. 4 in., Spinder oil pot lighter and driving irons, 14 ft. 2 in. of shafting

Address:

P. LOUCKS, Flesherton, Ont.

TO MILLERS

FOR SALE

"NATIONAL ROLLER MILLS," BRUSSELS, Ont.; capacity 100 barrels per day. Cheap, easy terms of payment. Address

"B.C.," P.O. Box 566, Toronto.

IMPORTANT TO MILLERS

LIBERAL CASH BONUS, FREE SITE, R.R. switch, etc., offered to a practical man who will erect and operate a grist and flouring mill at Wawanesa, Man.

Location one of the best in Manitoba.

Correspondence invited.

JOS. CORNELL, Sec'y of Ratepayers' Committee.

"BUILD TO-DAY THEN, STRONG AND SURE, WITH A FIRM AND AMPLE BASE." —Longfellow.

DO YOU?

WISH THUS TO BUILD. an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

SUBSCRIBE FOR ....

Canada Lumberman

YOU'LL LIKE IT

ADDRESS: TORONTO

John J. Dixon & Co.

. . . BROKERS

Canada Life Assurance Building

Toronto

Orders executed on the New York Stock Exchange and Chicago Board of Trade.

Private wires direct to New York and Chicago.

TELEPHONE 2212

USE

MYERS' ROYAL CATTLE SPICE

TESTIMONIAL.

DEPARTMENT OF AGRICULTURE, ONTARIO, Toronto, March 17th, 1893.

Gentlemen,—We have used Myers' Royal Cattle Spice during the present winter with both cattle and sheep. It seems to be equally valuable for both. I noticed especially the benefit on a lot of yearling rams. The change in their appetite and appearance was easily perceived after the first week or ten days' feeding, and they have steadily and rapidly gained since.—Yours very truly, (Signed) JOHN DRYDEN.

Messrs. Myers & Co., Toronto.

EMBRO OATMEAL MILLS....

ROLLED OATS

STANDARD

—AND—

GRANULATED

OATMEAL

MADE FROM SELECTED WHITE OATS.

Special terms made with Flour Millers for re-shipment with carload flour.

D. R. ROSS EMBRO ONT.

DUST! DUST!

Gibbs' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust. Invaluable to operators in every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel plated protector by mail, $1.00; postage 5c. Circulars free. Agents wanted.

Gibbs' Respirator Co., 36 LaSalle St., Chicago.

BRANDS:

STAR : LINCOLN
CROWN
RED CROSS
CLYDE MILLS
SPARKLING RIVER

Unsurpassed for Uniform Quality

GREENFIELD MILLS + AYR, ONT.

D. GOLDIE, Prop.

Daily Capacity 500 Barrels

JORDAN CHAMBERS
W. J. Kramer,
DESIGNER & ENGRAVER ON WOOD
TORONTO ONT

3½ Cents a day—

That isn't much money, is it?

About twenty-five cents a week or so.

And a man must be pretty hard up if he hasn't that much to spend every week.

Times are hard, they say; but if they are hard now to your family and yourself, what will they be to your family without you?

That's worth thinking about.

We think that no man should be without life insurance when it can be had at such a low rate as 3½ cents a day from the Manufacturers' Life, Yonge Street, corner Colborne, Toronto.

Write to us and we will give you all particulars.

ROBIN & SADLER
MANUFACTURERS OF
Leather Belting
SPECIALTIES
DYNAMO BELTS
WATERPROOF BELTING
MONTREAL TORONTO
2518 & 2520 NOTRE DAME ST 129 BAY ST.
Send for sample of our new SAWMILL BELT

Royal Mills, capacity 1,800 bbls.
City Mills, 1,100 bbls
Glenora Mills, 1,200 bbls.
Goderich Mills, 1,200 bbls.
Seaforth Mills, 600 bbls.
Winnipeg Mills, 1,200 bbls.

DAILY CAPACITY
7,100 BBLS.

HIGHEST QUALITY

Hungarian Patents
AND
Strong Bakers'
FLOUR

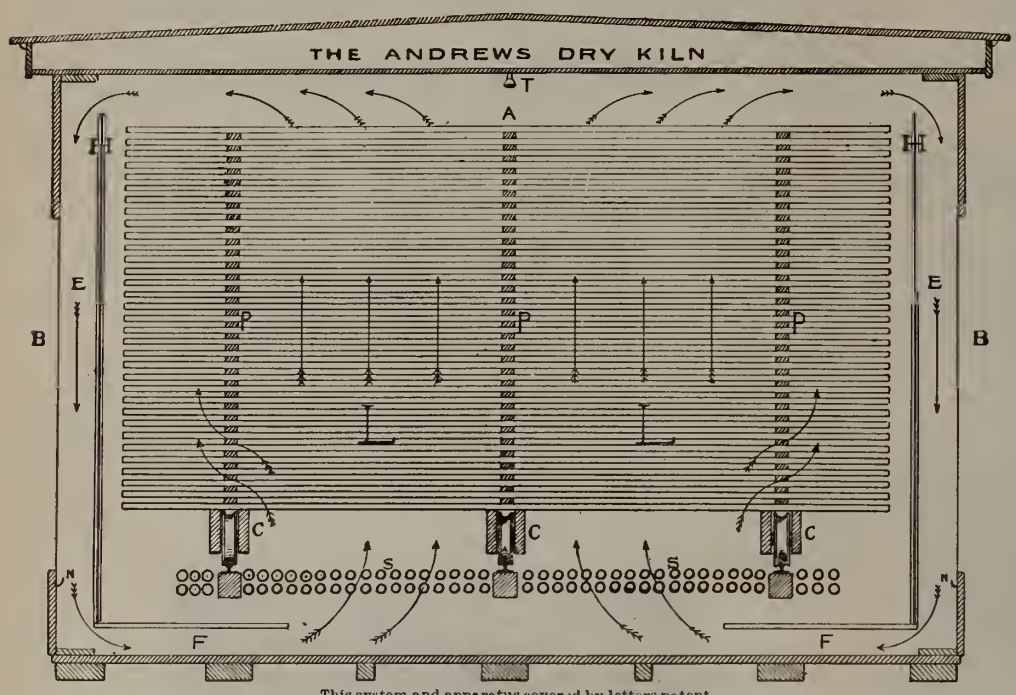
FIRST PRIZE, DIPLOMA AND GOLD MEDAL, EXHIBITION, JAMAICA : : : :

W. W. OGILVIE
PROPRIETOR

HEAD OFFICE:
MONTREAL, QUE.

THE ANDREWS DRYER

For Lumber, Shingles, Staves, Heading, etc.



This system and apparatus covered by letters patent.

A—Drying-Room. **BB**—Brass Condensing-Walls. **CCC**—Lumber Cars. **EE**—Down Air-Flues. **FF**—Bottom Air-Flue. **HH**—Inside Walls, protecting metal from heat. **LL**—Lumber on cars. **NN**—Brass Gutters for receiving condensed moisture. **PPP**—Sticks between lumber. **SS**—Double Steam-Coils. **T**—Automatic Steam Fire-Extinguishers. Arrows show direction of currents of air.

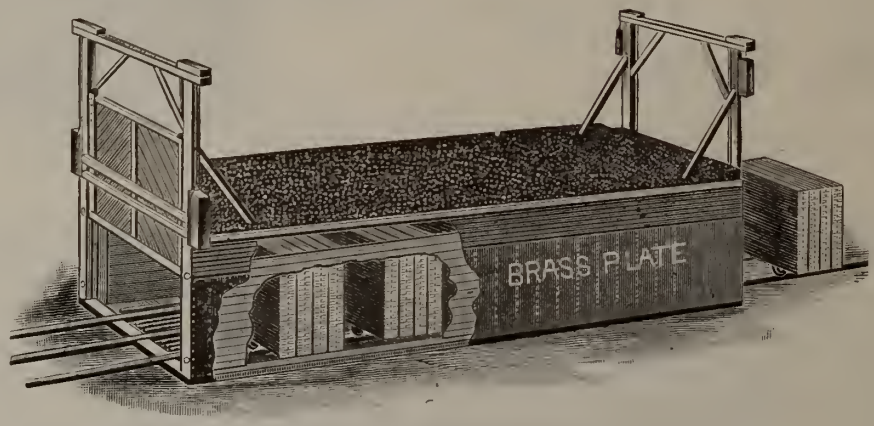
THIS DRYER

HAS PROVED TO PURCHASERS TO DO WHAT IS GUARANTEED IN SAVING THEM MONEY IN

Freight, Insurance, Time, Interest, Expense, Capital, Yard Room, Labor

There may be persons who do not appreciate the advantages of the artificial drying of lumber. But the shrewd men, in the manfacture of furniture and other woodwork where reputation would be sacrificed by a lack of proper material for good gluing and finishing, recognize a good system of drying as an important element of their success. High scientific authorities and thoroughly practical men are now agreed that the hot-blast and rapid-current systems ARE WASTEFUL, and that steam heat is the only safe means for artificial drying. The mode of applying steam heat most efficiently and economically is therefore now the essential point. The Andrews Dryer accomplishes this result more surely than any other known system.

NO FAN NO ENGINE
NO SMOKE NO CHIMNEY
NO SPECIAL FIREMAN OR FUEL
NO EXPENSIVE BRICKWORK
NO RISK OF FIRE
NO CHECKING OR WARPING
NO CASE-HARDENING
. . . . **NO EQUAL** . . . .



Outside View of the Andrews Progressive Kiln, showing Lumber placed crosswise the building, on cars.

"WE PUT GREEN SPRUCE IN DRIPPING WITH WATER, AND IN EIGHTEEN HOURS IT WAS DRYER THAN LUMBER THAT HAD BEEN STUCK UP IN THE YARD ALL SUMMER."

This is the verdict of a Quebec lumber firm, and we can give equal results every time.

The Andrews Lumber Dryer

Has been proved to possess the following points of excellence:

1st. That its drying is rapid and perfect.

2nd. That external and internal checking and discoloration are entirely avoided by this method.

3rd. That the drying is done by a CONTINUOUS system and the temperature of the kiln is under absolute control at all times.

4th. That our Dryer is free from the varying air currents (always wasteful) incident to all fan and open-draft kilns.

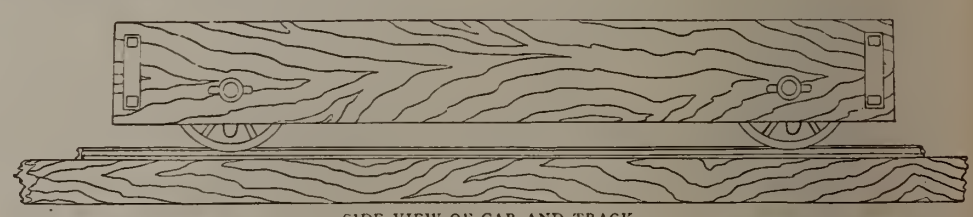
5th. That our drying is done by the slow continuous movement of a large body of slightly-moistened air.

6th. That our condensing surface is so very large as to be adequate to precipitating the moisture of the saturated air with the least amount of movement.

7th. That our piping is tested by high pressure and every outfit is fully guaranteed.

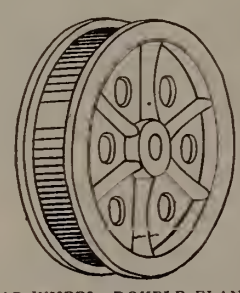
8th. That by our improved system of drainage the freezing of pipes becomes impossible.

SEND FOR CIRCULARS



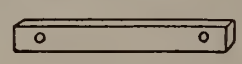
SIDE VIEW OF CAR AND TRACK.

DOUBLE FLANGE WHEEL ON SINGLE TRACK

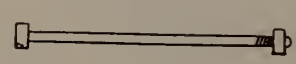


CAR WHEEL, DOUBLE FLANGE

SECTION OF CAR TRUCK, SHOWING AXLE BOX.



STRAP WASHER



BOLT

AXLE

DOMINION DRY KILN COMPANY

CANADA LIFE BUILDING : : : : TORONTO, ONT.

A POOR THING IS DEAR AT ANY PRICE

THAT IS WHY IT PAYS BEST TO PROCURE

... THE GENUINE ...

DUFOUR & CO'S BOLTING CLOTH

... IT IS THE BEST IN THE WORLD ...

A large stock of all numbers in Heavy, Extra Heavy and Double Extra Heavy Qualities from 0000 to 16 always on hand.

Also Gritz Gauze from 16 to 72 mesh at lowest possible prices.

CLOTHS MADE TO ORDER TO FIT ANY SIZE REEL OR SIEVE ON SHORT NOTICE.

ALSO PLATED STEEL SCALPING AND BOLTING WIRE FROM 10 TO 100 MESH.

TEMPERED STEEL BRAN DUSTER WIRE FROM 36 TO 70 MESH.

SPECIAL WIRE FOR ALL PURPOSES:

Perforated Zinc, Leather, Rubber, Cotton and Link Chain Belting, Sprocket Wheels, Cockerell Steel Wire Scouring Cases for Wheat Cleaners, Elevator Buckets, Bolts, Caldwell Steel Conveyor, all sizes, Flour Triers, Grain Scoops, Dust Protectors, and a Host of other Articles and Supplies for Millers, all of the Very Best Quality at Reasonable Prices. Orders by mail receive ready attention and prompt despatch.

WRITE FOR CATALOGUE AND CIRCULARS.

WM. & J. G. GREEY,

2 CHURCH STREET . . TORONTO, ONT.

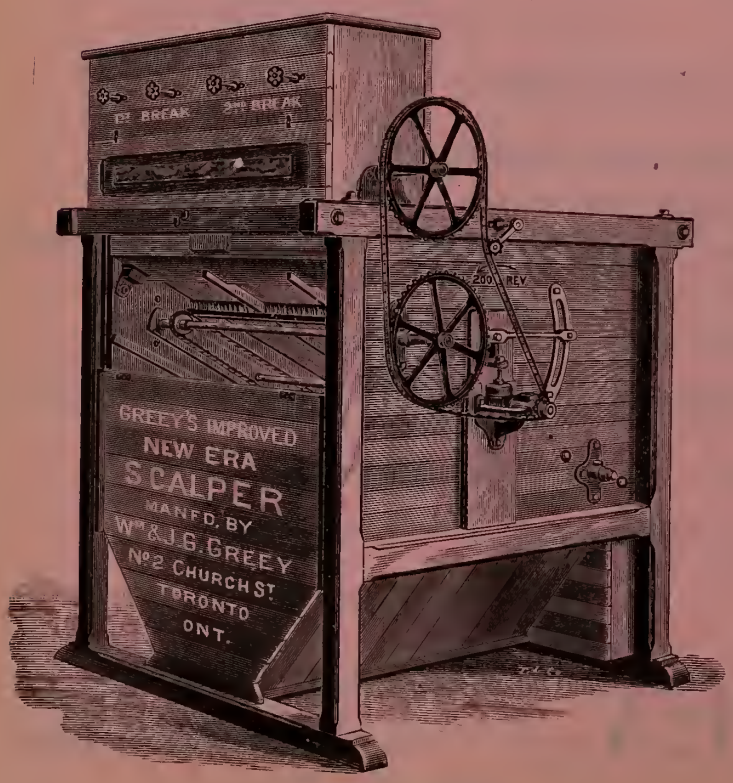
Standard Curved Sieve

AND THE IMPROVED NEW ERA SCALPERS

2 SEIVE SCALPER.

ARE
THE
POPULAR
MACHINES
FOR
HANDLING
BREAK
STOCK
AND
GRADING
MIDDLINGS

3 SEIVE SCALPER AND GRADER.



IMPROVED NEW ERA SCALPER.

One 1 Sieve New Era will scalp the breaks in a small mill . .

One 2 Sieve Standard Machine will scalp the breaks and grade the coarse middlings in a small mill . . . . . .

One 3 Sieve Standard Machine will scalp the breaks and make two grades of middlings . . . . . .

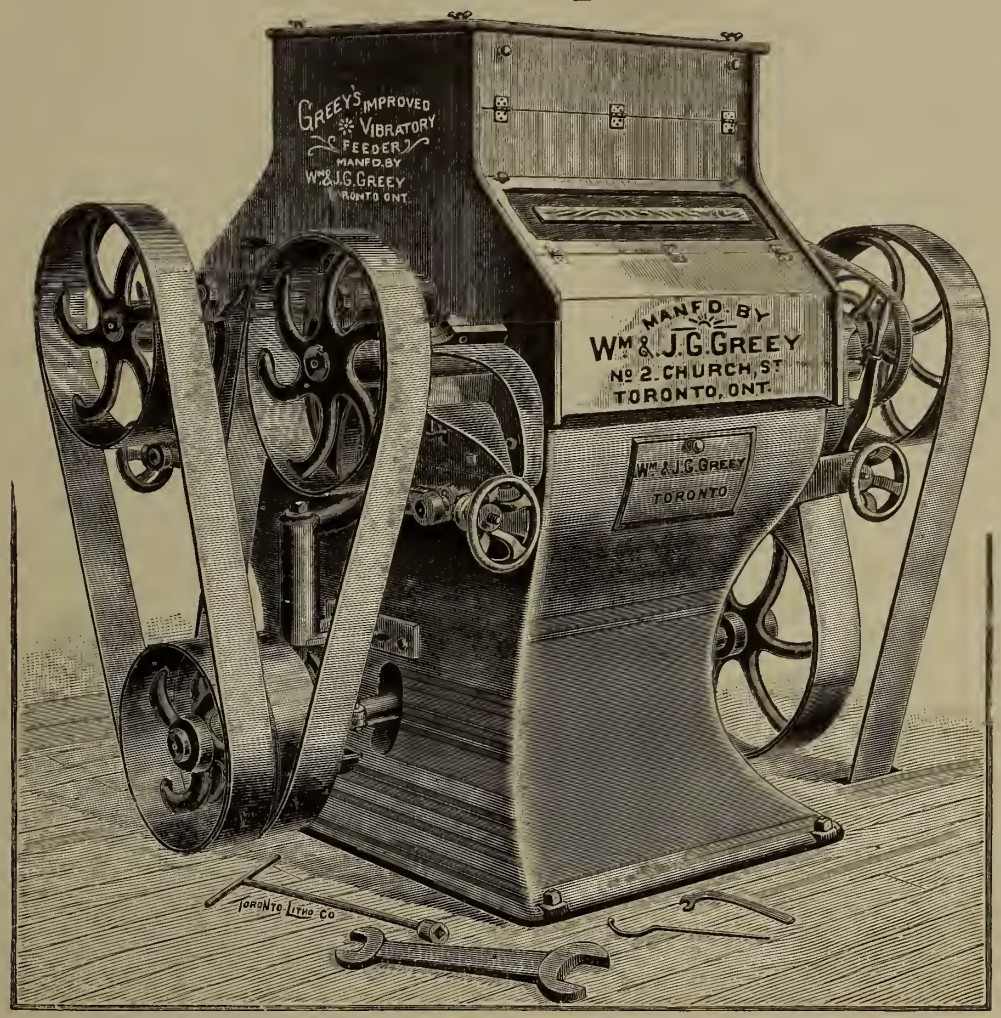
MANUFACTURED BY

WM. AND J. G. GREEY

2 Church St., Toronto, Ont.

The Best is Cheapest in the End

Are always in better working condition
Produce better results
Don't have to be corrugated and ground so often



Mill don't have to shut down for repairs
Makes more money
Considerable saving in expense

GREEY ROLLS

ARE SO HARD AND TOUGH

LAST TWICE AS LONG AS OTHERS

..... Guaranteed to be absolutely free from any flaw .....

GREEY ROLLS ARE THE BEST

Old Rolls ground and corrugated with the utmost precision

Warranted perfectly true, and returned promptly

OUR ROLL GRINDING AND CORRUGATING PLANT is the largest, best equipped and most accurate in the country; our stock of Corrugating Tools the most varied. New Corrugating Tools of any style made to order with the greatest nicety.

MANUFACTURED BY

WM. & J. G. GREEY

2 CHURCH ST.
TORONTO

DICK, RIDOUT & CO.

JUTE AND COTTON

BAGS AND SACKS

OF EVERY QUALITY AND SIZE REQUIRED.

Strict attention given to prompt shipment.

Original Designs for Brands Prepared Free . . . Printing in beautiful Bright Colors at Lowest Prices

SEND FOR SAMPLES AND PRICE LIST

DICK, RIDOUT & CO., TORONTO, ONT.

Actual Results

NET PREMIUMS PAID TO THE

ONTARIO MUTUAL LIFE

on an ordinary Life Policy of $1,000, No. 1230 during its first 20 years, issued for age 37 :

In 1872....	Paid	$26.57	In 1882....	Paid	$13.29
1873....	"	26.57	1883....	"	12.33
1874....	"	26.57	1884....	"	11 69
1875....	"	24.71	1885....	"	11.35
1876....	"	20.65	1886....	"	11.35
1877....	"	19.16	1887....	"	12.19
1878....	"	17.32	1888....	"	12.88
1879....	"	13.02	1889....	"	12.41
1880....	"	12.65	1890....	"	11.91
1881....	"	13.29	1891....	"	11.38

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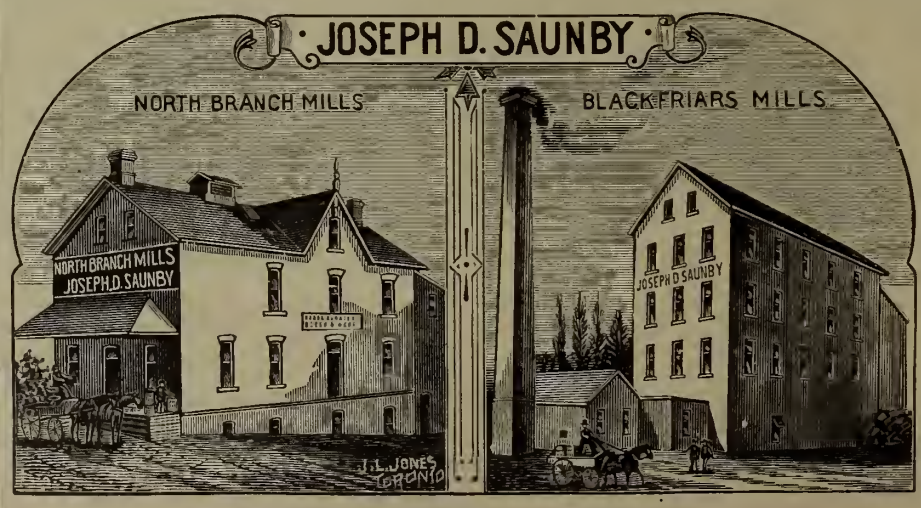

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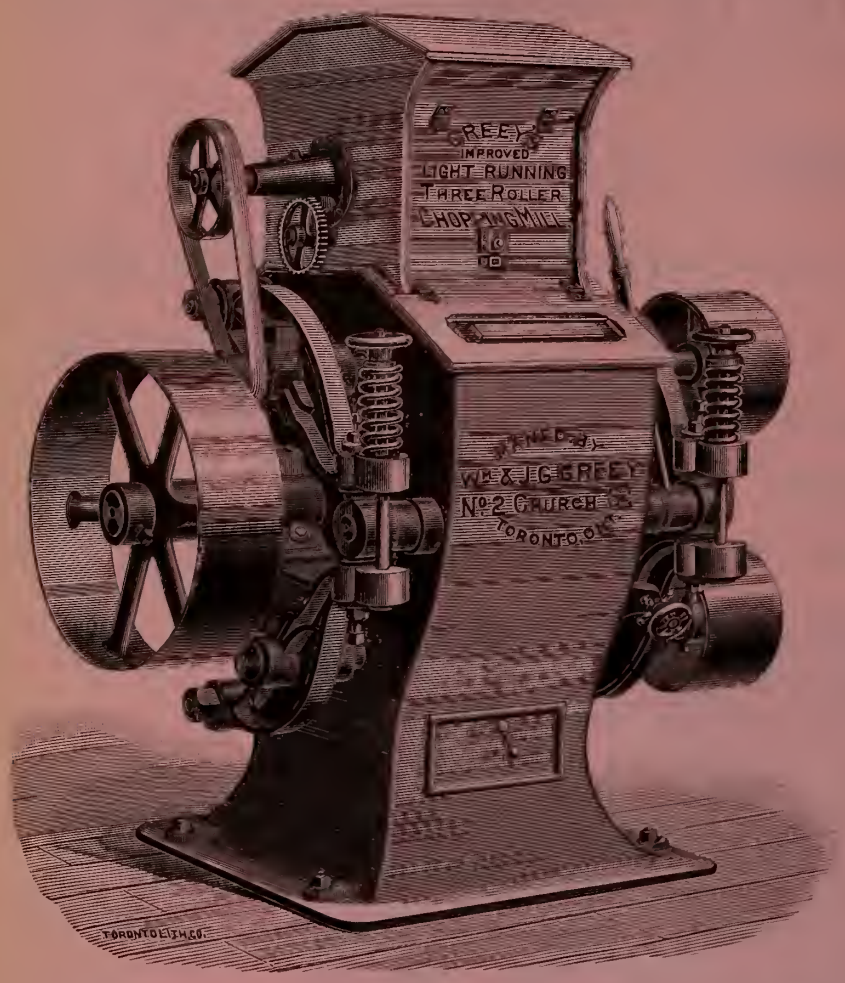

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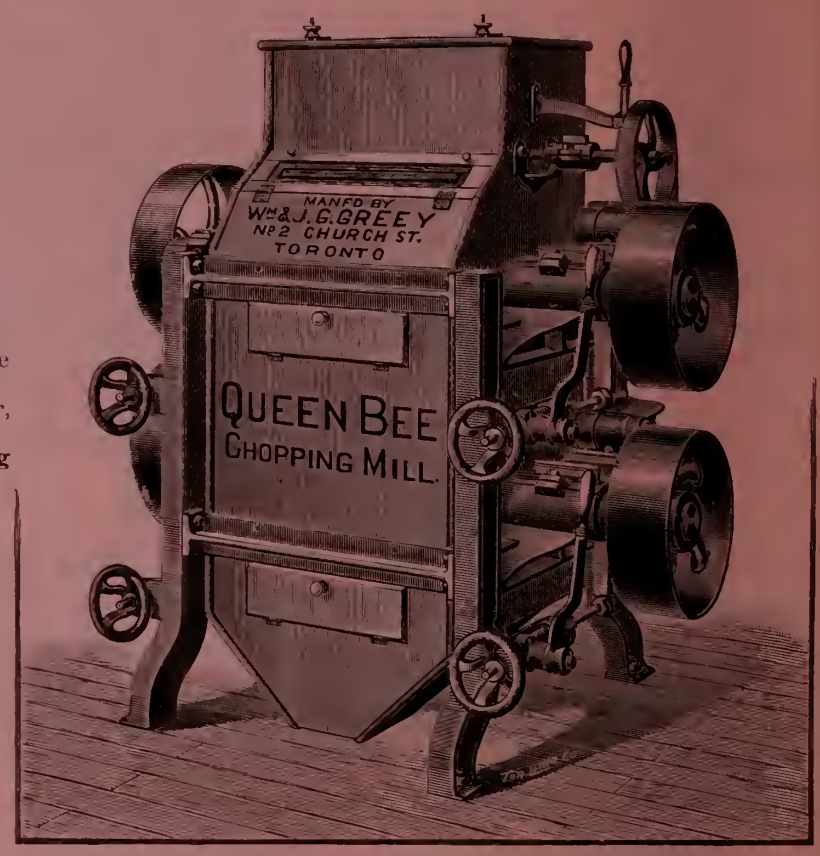

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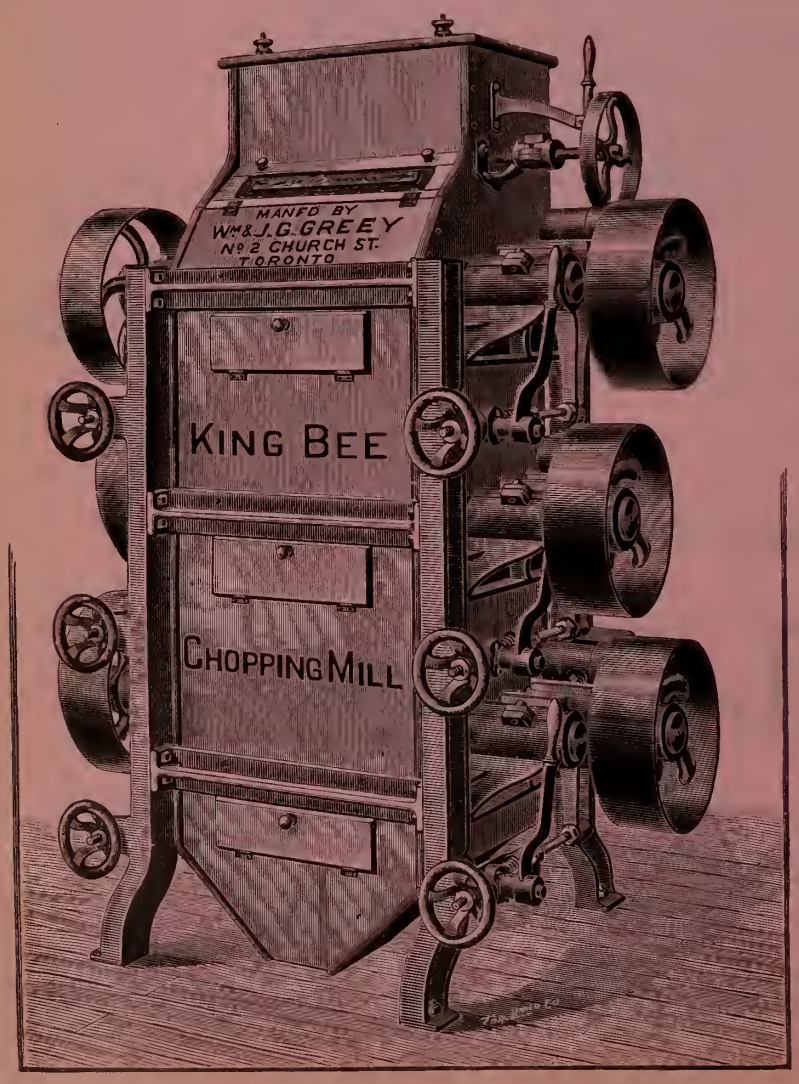

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(Signed) JOHN DRYDEN.
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Old Series, Vol. XI. / New Series, Vol. III. } Number 9. TORONTO, ONT., SEPTEMBER, 1893 { Terms, $1.00 Per Year / Single Copies, 10 Cents

CHARACTER SKETCH.

ANDREW H. BAIRD,

PRESIDENT DOMINION MILLERS' ASSOCIATION.

"Men of character are the conscience of the society to which they belong."—Emerson.

WITHOUT good leaders, no movement, political, social, business or otherwise, can hope to succeed. Napier relates that at the combat of Vera, when the Spanish centre was broken, and in flight, a young officer named Havelock sprang forward, and waving his hat, called upon the Spaniards within sight to follow him. Putting spurs to his horse he leaped the abattis, which protected the French front and went headlong against them. The Spaniards were electrified; in a moment they dashed after him cheering for "El chico blanco!" (the fair boy), and with one shock they broke through the French and sent them flying down hill. The story of history is the same, wherever we turn the page. It may be of military annals; the affairs of government; or achievments in the field of commerce, which have been none the less remarkable and potent in their influence on the world's history; success has come of good generalship, where failure has been the result of blunders committed by those who have been the responsible leaders.

It has been the goodfortune of Canadian millers to have capable leaders. The name of the late Thos. Goldie, is, we are sure, as was the name of Douglas of Scottish history to his countrymen, even now, an inspiration to every miller, who was privileged to work under his generalship, when president of the Dominion Millers' Association. Though away in that newer western country, Manitoba, Mr. Edward Peplow is remembered for the zeal and effort he gave to Canadian milling during the interim when he occupied the president's chair, between the time of Mr. Goldie's death and the annual meeting succeeding it. The record of Mr. M. McLaughlin, president of the past year, is written in ink yet damp on the page of milling history, and tells of the most successful year in the history of the Dominion Millers' Association.

The mantle of Mr. M. McLaughlin has fallen on worthy shoulders in the person of Mr. Andrew H. Baird, of Paris, who was the unanimous choice for the presidency at the meeting of August last.

Mr. Baird was born on the 1st of March, 1834, in the city of Montreal, Que. He is the eldest son of Nicol Hugh Baird, civil engineer, and Mary Telfer White, both of whom were born in Scotland, and were married at Bytown (now Ottawa) in 1831. His father practised his profession in Russia for a few years, then came to Canada in 1827, and was employed on the Rideau Canal under Colonel By, and after this in the Public Works Department until his death in 1849. Mr. Baird was educated at private schools in Montreal, and came to Paris at the age of fifteen as clerk for Mr. Chas. Whitlaw, grain merchant there, and with the exception of four years, when he was paymaster on the Buffalo and Lake Huron Railway, has resided there ever since.

"The strong man and the waterfall channel their own path" are the words of an old proverb, and fitly tell the story of Mr. Baird's career. Resting on his own pluck and energy, born of rugged Scottish parentage, he has cut his own channel through life from the small beginnings of a clerk at fifteen to become to-day one of the solid business men of the province and a public spirited citizen, active in various interests that make for the weal of the nation.

To millers Mr. Baird is best known as the active head of the milling firm of Whitlaw, Baird & Co., of Paris. Whilst he has always acted on the principle that his first duty was to his business and his family, and the success of his firm is largely due to this devotion to business duty, he has ever been ready to give of his time and talents to advance the interests of the town where he has for so many years been an esteemed citizen. Besides milling he is interested commercially in the Carpet Co. and the Wincey Mill Co., two local enterprises. He has been a member of the Paris Town Council since 1863, with the exception of three years, and has held for longer or shorter periods, the offices of Councillor, Deputy Reeve, Mayor, Warden of the County of Brant, member of Public School Board,

ANDREW H. BAIRD.

President and Director of the Mechanics Institute, and President of the Board of Trade. Mr. Baird was also Master of Masonic Lodge No. 82. He has taken a very deep interest in the Canadian volunteer service, holds a first-class certificate from the Military School, and retired as captain in 1874. In politics he is a Liberal-Conservative, having contested North Brant in 1872 and in 1879.

Mr. Baird has for years been an active force in the counsels of the Dominion Millers' Association, holding important positions on the Executive and its leading committees. Last year he occupied the chair of first vice-president, and gave generously of his time to the work of the association. His genial and kindly bearing has ever made him popular with his associates, he evidently holding with Emerson, that "Life is not so short but that there is always time for courtesy." It can be said without reservation that Canadian milling is in safe hands under Mr. Baird's leadership.

PURE MIDDLINGS.

IN an article of some length in the London Miller on "Milling According to System," Mr. W. T. Bates, after remarking that the important matter is not so much the system of milling one may adopt, but rather how efficiently that system is worked, has this to say on the subject of middlings:

"It is a fundamental mistake to treat pure middlings too tenderly. When pure, the sooner the flour product gets in the sack the better; it is in the production of pure middlings that great care and special attention should be lavished; after that it is child's play. I have no faith in many subdivisions, but prefer to concentrate and aggregate all the pure material, and, as a consequence, all the impure stock, in their respective divisions, and to allow as little offal as possible to reach the smooth rolls. A man who properly understands his system can nearly always humor and control at least some of his purifiers by the adjustment of his semolina rolls; and in like manner accommodate his clothing by the same agencies. I think we are still liable to misconception as to the best methods of doing certain things; for instance, some millers declare that they get the best flour from large purified semolina; others from the medium sized, and still others (I think the majority) from the pure fine middlings or dust. Now, all of these are right in one respect, for the quality of flour from each of these products depends altogether upon the system, and the working of the system. In a mill with only three or four reductions it is necessary to reduce the large semolina as far as possible to flour and offal, consequently the flour will be very good. In a slightly longer system this semolina may be only broken for the production of medium-sized stock; consequently the flour product will be poor, and the loaf unsatisfactory, the truth being that the flour is only dustings from middlings, and not pure semolina flour. The product of this large semolina may, after purification, be reduced to flour, only slightly so for fine middlings; in the latter case we again get a medium flour, but we get middlings which, when reduced, give the best results.

"It is obvious from the foregoing that everything depends upon the method of working, and that each may be right when he declares his preference for flour made at these different points. The best of all these methods, however, is the last, and is really the only scientifically correct way of working, and this is where the fully-equipped and well-managed mill shows to advantage. If well-handled, 50 per cent. of good patent flour can be made from the three reductions of fine semolina and middlings, but of course everything depends upon the previous manipulation of the stock. Bad management of the initial process will throw everything out of harmony, to the certain detriment of the financial results.

HOW GOVERNED.

THE wheat markets are governed now, says Market Record, as they have been for some time, almost solely by the actual supply and consumptive requirement. There is a lack of speculation and the loss of it is shown in the daily record of prices. At present the supply is greater than the present demand. This is the only thing buyers look at. The prospective supply, however, seems to be less than what the prospective requirements will be.

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

MILLER AND FARMER.

So much importance in milling is to be attached to the quality and nature of the wheat used, that we must welcome every effort employed to grow a good milling wheat. The Dominion Millers' Association has shown its interest in the question by constantly drawing the attention of farmers to the matter, and aiding them by practical suggestion born of their own experience. The Experimental farms, under both Dominion and provincial management, keep experimenting on these lines at their different stations, and here again the Millers' Association has given its co-operation and help.

Not, probably, so much for the purpose of arriving at the milling qualities of wheat sown, but rather to ascertain the yield and strength per acre, the Ontario Agricultural Experimental Station has been conducting for some time a system of co-operative work in agriculture throughout Ontario. Fertilizers and seed are distributed annually among the graduates of the College through their association known as the Agricultural Experimental Union, and also among other interested and progressive farmers throughout the province. In a letter to the press under date of August 26, Mr. C. A. Zavitz, one of the professors in the College, who has had the management of this work, gives some particulars of the methods of operation and results.

In the spring of the present year 322 packages of fertilizers, 894 of fodder feed, 1,230 of root seed, and 3,110 of spring grain were sent out to Ontario farmers. There are at present as a result of this work, which has been growing steadily from the start in 1886, upwards of 800 experimenters with spring crops and Mr. Zavitz is prepared to supply 400 others with winter wheat. Up to the present date 135 experimenters have been heard from. Of this number, 60 sent in satisfactory reports of carefully conducted experiments, sixteen forwarded partial reports and 59 wrote of failure or unreliable results. The 60 satisfactory came from 23 counties, eleven of which were east and twelve west of the City of Guelph. The yields per acre have been calculated from the amounts grown upon the plots, which in each case measured one square rod, and paths three feet wide were allowed between the plots. The following table gives the average amount of straw and of grain per acre of the eleven varieties grown on 60 Ontario farms and at the Experiment Station at Guelph:

Name of variety.	Straw per acre (tons.)	Grain per acre (bush., 60 lbs.)
1 Dawson's Golden Chaff	1.84	34.9
2 Golden Drop	1.71	34.4
3 Early Red Clawson	1.60	32.6
4 Bulgarian	1.76	31.4
5 American Bronze	1.84	31.3
6 Mediterranean	1.85	30.8
7 Surprise	1.51	30.7
8 Jones' Winter Fife	1.65	30.0
9 Fulcaster	1.50	27.4
10 Fultz	1.92	26.4
11 Red Wonder	1.26	24.9

The Experimental Union intimate that sufficient money has been furnished for the distribution of two thousand packages of winter wheat over Ontario this year. These will supply four hundred experimenters with five varieties each. The following varieties have been chosen and are divided into two sets as indicated below: Set 1.—Dawson's Golden Chaff, Golden Drop, Early Red Clawson, Bulgarian, American Bronze. Set 2.—Dawson's Golden Chaff, Surprise, Jones' Winter Fife, Early White Leader, Early Genesee Giant.

The seed will be sent out by mail free to all applicants, and the produce of the plots will be the property of the experimenters; and in return the Union hope to receive full reports of carefully conducted tests.

The Dawson Golden chaff is said to be a new variety claimed to have been originated by Robert Dawson, of Paris, Ont., who along with his neighbors are growing it quite extensively.

It is to the interest of millers throughout the province to study closely the results of these experiments. Grain men have a direct concern in the kinds of wheat grown in the country and the anticipated yield of each variety. Millers have likewise an interest in this phase of the question. They are especially concerned in the milling quality of the wheat that will be most largely sold in their section, and unless wheat possesses strength in this respect the farmer will be handicapped in marketing his wheat.

The interests of farmer and miller are not to be separated. The old jibe that "a miller has fat hogs and everybody knows it" has no significance, if in honesty it ever had, to the farmer of this day in his dealings with the miller. They both pull the same way, and not at opposite ends.

EDITORIAL NOTES.

ONE of the pithy sayings of the Southwestern Miller is this: "It does not require extreme carelessness to waste five pounds of wheat in making a barrel of flour. And just look at the difference it makes in profits or losses in over a fifty-barrel mill." Be careful of the small leaks.

IT is well for millers to remember that the Dominion Millers' Association at the annual meeting in August unitedly fixed the following as the standard wheat buying table: Testing 62 lb. or over pay 2c. over; 61 lb. pay 1c. over; 60 lb. pay standard; 59 lb. pay 1c. less; 58 lb. pay 2c. less; 57 lb. pay 5c. less; 56 lb. pay 8c. less, etc.

IT is a round about road to sell wheat by way of Hogtown, but it looks as though this might be the popular route for a season at least. Prices may advance, but the way figures run just now, the farmer thinks he can see a dollar for wheat more readily through the hog than by way of the mill. We are not sure that the miller will object to a portion of the wheat crop going that way for a time at any rate.

A CHANGE of one letter is all that is required sometimes to knock the sense out of a sentence, or to make a writer say something very different to what was intended. By the change of one letter in the annual report of Secretary Watts in last month's MILLER, in the membership clause, the types read thus: "A like number were 'turned' out." The "t" should have been "b," the reference being to the millers who had been "burned" out during the year, not "turned" out.

VARIOUS and queer are some of the notions entertained in regard to money. Why cannot the government make money enough to meet all wants of its people? is the stupid question asked not unfrequently by people who would be insulted were you to intimate that they were stupid. The United States has been filling its treasury for months back with silver dollars at the rate of four million a month, and while its vaults have been full to bursting the country has been passing through a tryingly severe financial depression. The condition is not at all novel to students of economic subjects. The history of the English land bank scheme, the Rhode Island paper bank experiment, the John Law bubble in France, the land loan fiasco of the Argentine Republic, the crop moving paper currency of Mississippi, the banking mistakes of Alabama and Michigan are examples illustrating the inevitable result of schemes to inflate the circulation with cheap and valueless money. To borrow an illustration from Adam Smith, even sensible men forget sometimes that the highway to a particular place is not the place itself—the houses and lands. It is simply a means of reaching the place. Money is only a vehicle of exchange, and must have behind it something which is something. Dollar bills may be run off the printing press to advertise the wonderful values that some shoddy dealer is offering in pants, but when you come to buy the pants you must put a more tangible value behind the handsomely printed bill the same dealer has given you. The money issued by tailor or government is worthless if it has nothing substantial as its real representative.

IT is almost universally the case that the individual who possesses a little knowledge forgets, seemingly, that there is some one who has not even that little possession. Many there are who know more, but some one knows less. The fact begets in us the custom of talking over the heads of those to whom we may be honestly desirous of imparting information. Moreover, it must be remembered that while age and experience give knowledge, at least this ought to be the case, yet all have not reached that period when the wrinkles are becoming marked and the grey hairs are leaving traces in our beards. The young, however, are always with us just as surely as are the poor. There is the old miller who knows all about milling that can be told. And a dessertation on rolls, or middlings, or corrugations, or variations of steam power, from the pen of a Bates, Abernethy, Grimshaw, Tompkins, or other technical expert, and student of science, will contain nothing new to him. He is a perfect miller, wholly rounded-out, knowing everything that can be known. But what of the boys who are only on the threshold of practical milling? Bates, is to them a revelation. Tompkins is a cyclopædia of mechanics to their budding intellect. The older miller must not pass by the article that meets him in his technical journal with the curt criticism, "nothing new." It is not new to him, possibly, even in this age when there are new shadings of truth constantly coming to the front. It is new, and is the groundwork to that young man in your mill, whom some day will be known as the master expert miller of the entire country side.

A MILLING cotemporary, across the border, is of the opinion that underbilling cannot be prevented by legislation. "All laws that interfere with private affairs," says that journal, "are open to distrust, and in no country has it ever yet been possible to make men honest by law. Canada can not convert her dishonest merchants and manufacturers into honest men by threatening to hang, draw and quarter them for dishonest practices." This may be so. Laws against stealing do not stop stealing, altogether. A police force is still a necessity of civic government. The peculator and the embezzler are abroad, though forced frequently to become acquainted with the inside of prison walls. The heroes of the Panama Canal scandal will probably find their duplicates in another era, notwithstanding the punishment and disgrace that has been visited on the aged and the younger De Lesseps and their associates in crime. Tammany exposures have not entirely wiped out civic mal-administration though a Tweed made his home in the Tombs. Punishment came heavily upon the directors of the Glasgow Bank, and yet directors continue to wreck banks. Around about Ottawa and Quebec those in high places have abused the trust placed in them, and have been compelled by a righteous public indignation to step down and out from public life. These are all records of history. But what might have been the record if the line had not been drawn somewhere and the individuals concerned in these frauds brought to justice? Better that men should be honest from higher motives, nevertheless the terror of the law is a powerful deterrant, and, in some instances, is the only influence that keeps men honest.

DOMINION MILLERS' ASSOCIATION.

IMPORTANT MEETING OF THE EXECUTIVE.

A MEETING of the executive of the Dominion Millers' Association was held in the Board of Trade building, on Wednesday, 13th inst., with the following members in attendance : A. H. Baird, Paris, president; H. Barrett, Port Hope, 1st vice-president; Wm. Galbraith, treasurer; C. B. Watts, secretary; M. McLaughlin, J. L. Spink, Toronto; J. D. Saunby, London; J. D. Flavelle, Lindsay; W. H. Meldrum, Peterboro'; J. Galbraith, Allandale; Jas. Goldie, Guelph.

A report was read by the secretary commenting on the success of the annual meeting in August, and outlining a programme for consideration by the executive.

The following millers were elected members of the association : Rock Bros., Springford ; A. B. Bell, Kimberly; Campbell & White, Oshawa; C. & G. J. Wilson, Masson, Que. ; Geo. Elphick, Pinkerton.

Copy of a circular letter was read by the secretary, that had been issued by the Knickerbocker Co., of Jackson, Mich., charging that millers in various parts of Ontario had been guilty of infringement of the patents of this concern by the erection of Cyclone dust collectors on their own account. It is claimed that the Cyclone is controlled in Canada by certain mill-furnishing firms under arrangement with the Michigan firm. On the other hand millers say that the patent is not valid, one miller writing to say that the principle of the Cyclone had been used by him as far back as 1870, which is a decade and more before the Cyclone was patented. Mr. Knickerbocker is in Toronto in connection with the matter, and it is stated that evidence has been collected against millers by a party who was at one time traveller for a Canadian mill-furnishing house. About 100 of these Cyclones, it is understood, are in use in Ontario, that have been erected by millers themselves. United States Millers' associations have made it a part of their work to contest cases of the kind on behalf of their members. The matter is under consideration by the Dominion Millers' executive, just what measures will be taken not yet being decided on.

Complaint having been made of the practice of some millers in preparing short-weight barrels of flour, the secretary was instructed to secure all the evidence possible bearing on the matter, and report to the executive.

Mr. M. McLaughlin was re-appointed chairman of Freight Committee, and with the exception that vice-president Barrett takes the place of Mr. Rice, the composition of the committee remains the same as formerly.

Seed Committee for the year: T. O. Kemp, Seaforth, chairman; J. C. Vanstone, Bowmanville; J. G. Bechtel, Burford; N. H. Stevens, Chatham; Jno. Galbraith, Allandale.

The following names will be submitted to the Government from which to make a choice for the committees on grain and flour standards—Ontario : T. O. Kemp, Seaforth ; Jas. Goldie, Guelph; W. H. Meldrum, Peterboro'; J. C. Vanstone, Bowmanville. Manitoba: C. B. Watts, Toronto. Flour standards : R. Noble, Norval, and J. Galbraith, Allandale.

Geo. Edwards was appointed auditor for the association.

The secretary was instructed to consult with the solicitor of the association, Mr. Herbert L. Dunn, with a view of preparing a scheme to protect members of the association against unreliable dealers and brokers.

No steps will be taken in the meantime to appoint a flour seller for the association.

Mr. M. McLaughlin made mention of the fact that the freight rates on flour from Minneapolis to Liverpool were no higher than from Ontario points to Liverpool. How the railways carry flour a distance of about 1,200 miles to Montreal in the one case, and only some 400 miles for the Ontario miller, and yet charge the same rates, is a matter the Freight Committee will likely deal with.

As the first meeting of the new executive a splendid start was made in the work of the year, and speaks well for the new broom, which is evidently a good one.

Mr. D. Plewes, lately miller in the Norwood Roller Mills, has secured a situation as miller in Emmett, Michigan.

THE WORLD'S WHEAT.

A REPORT issued by the Bureau of Industries for Ontario gives the following as an estimate of the world's yield of wheat last year:

Europe.—France, 300,000,000 bushels; Russia-Poland, 247,000,000; Italy, 112,000,000; Spain, 65,000,000; Hungary, 136,500,000; Austria, 51,650,000; Germany, 102,000,000; United Kingdom, 65,000,000; Turkey in Europe, $39,720,000; Roumania, 58,400,000; Bulgaria, 51,000,000; Belgium, 22,700,000; Portugal, 6,100,000; Holland, 5,600,000; Greece, 3,970,000; Denmark, 3,400,000; Servia, 11,350,000; Sweden and Norway, 3,970,000; Switzerland, 8,500,000. Total, 1,293,860,000.

America.—United States, 516,000,000; Canada, 55,000,000. Total, 571,000,000.

Other Countries.—India, 205,000,000; Algeria, 18,000,000; Egypt, 9,000,000; Australia, 34,000,000; Chili, Arg. Rep., etc., 53,000,000; Asia Minor, 33,000,000; Persia, 21,000,000; Syria, 12,000,000; Tunis, 4,000,000. Total, 389,000,000. Grand Total, 2,253,860,000.

ABRASION OF WHEAT PRODUCTS.

THE manner of handling wheat products, and the distance they travel in the course of manufacture, writes Mr. W. G. Clark in the Roller Miller, are two things very often regarded as of little importance in the art. Simple experiment, however, will readily show that abrasion is the inevitable result of travel, and that where the travel is long the abrasion becomes a factor working materially against good flour and a generally high order of results.

Abrasion is very much in evidence in the mills of to-day, producing quantities of impalpable dust that not only discolors the flour but also makes it of uneven grain; whence follows a like uneveness of quality in the bread. In fact, a flour containing a large percentage of this dust has no life, no cellular formation to retain the carbonic acid gas given off by the yeast in fermenting, and little water-absorbing capacity; while a purely granular flour has all these qualities in a high degree.

When I say that one can reduce middlings to flour by simply rubbing them between the fingers, it is plain that when middlings are subjected to a prolonged rubbing against the sides and bottoms of long conveyors and spouts a considerable portion of them will be reduced to something finer than flour. This stuff ought never to get into the flour, but once there it must be separated as completely as possible.

Flour that will pass through a 16 cloth is granular and fit for use, but here, in my mind, should be the limit. Yet, if we were to test the flour from almost any mills to-day we should find a surprising quantity of so-called flour that would bolt through 17, 18, or even finer cloth. Now such stock is not fit to mingle in flour. It means poorer flour, poorer bread, and less bread to the barrel.

So I believe the most important steps in improved methods of milling will be in the way of reducing to a minimum the travel of stock. The "mill of the future" will have no conveyors except for wheat. Its machinery will be so arranged that the breaks will pass from one set of rolls to another, through scalpers and bolters, and each reduction drop to its place—finished material to flour packer, unfinished to roll or reel—without conveyors. I believe that 60 per cent. of the elevators will be done away with, and be replaced by belt carriers, and that not more than one-fifth the present length of spouting will be employed.

Hungarian flour is selling at $1 to $1.50 above the best American patents. Why? Because it is milled by a method which avoids abrasion of products, and which therefore ensures an even and perfectly granular flour, yielding better bread and more to the barrel. I know this superiority is not in the grain, for the mills of Hungary have ground American wheat in short crop years, and still maintained quality and price.

We might as well acknowledge these facts—for they can be proved—and set about mending our methods accordingly.

I cannot speak too emphatically of the evil consequences of abrasion. I wonder that in these days of close competition and searching criticism on flour-mill processes so vital a matter should be generally neglected. A miller wishes to make a simple change in his flow. To this end he adds an elevator, or long conveyor, a liberal proportion of spouting, and thinks it a good job so long as the stuff "gets there." The day is coming when no progressive miller will think of doing such a thing.

To return to the baker's point of view—bread made from flour containing the dust of abrasion will dry out quicker than that from a granular flour. This is because the dust is weak, or rather, lifeless. Good bakers would tell us furthermore, that this sort of flour yields a bread less sweet in the beginning, and souring much more quickly. The reason is, that in abraded flour the process of fermentation or decay is more rapid—the fine particles, indeed, have perhaps been partly decomposed before fermentation sets in. Bread of impure smell and taste, and poor keeping quality, is a natural result of abrasive milling.

LET MILLERS GO SLOW.

MR. E. R. Hutton has this to say on what he terms a stone at the hornet's nest: Any miller fully understanding how to handle sieve purifiers and well-constructed aspirators, who throws them out to put in air-circuit (return air) machines solely to get better middlings, makes a mistake. Now, do not misunderstand me to say that the old machines are invariably superior; but, there are conditions frequently favoring the "return air." If the sieve purifier has no objectionable matter afloat in its surroundings there is no reason why its work should be anyway inferior; and, on the other hand, if the dust-catching device of the "air-circuit" is anyway defective the impurities are cast back into what should be the purified middlings; consequently the efficiency of the air-circuit purifier is largely dependent on this point. I mention this matter because I hear the statement that "new machines turn out cleaner middlings than is possible for any sieve machine to produce." The fact of the matter really is that the exhaust of the dust catcher is spouted back, thus rotating the current. I wish all due success to the "return-air," some (and some only) of which are skillfully constructed; but let no poor ignoramus think that simply trading purifiers will rectify a crooked flow.

BELT INJURIES.

SO many people are injured or killed while "fixing a belt," that one is led to ask whether it is the fault of the injured man or the mill owner in not providing suitable appliances for "fixing belts"—by which is meant, usually, throwing them on pulleys. Belts do not often hurt anybody while being laced, or while at rest; running belts do, of course, but probably more men are hurt in the act of starting or shifting belts than in any other acts connected with them. It is but slight comfort to tell the maimed man, or the family of the dead man, that it was his own carelessness. More than likely it was, for without carelessness there would be but few belt accidents. It is the duty of every mill owner, every foreman, and every workman, to persistently point out the dangers attending carelessness in handling running belts. The owner's carelessness may cost him a large sum in damages awarded by court, but the workman's carelessness inflicts a different penalty.

NOISE FROM A GAS ENGINE.

AMONG the various engineering investigations which for some time have been engaged the attention of mechanical experts is that having in view some ready method for deadening the objectionable noise made by the puffs from the exhaust pipe of the gas engine, but only an indifferent amount of success has hitherto attended these efforts. The most recent contrivance of the kind is a device described in a French journal, and claimed to be simple, efficient and inexpensive. Briefly, a pipe split for a distance of about two metres is attached to the end of the exhaust, with the split end upward, and, beginning at the lower end of the cut, which may best be made by a saw, dividing the pipe into two halves, the slotted opening is widened out toward the top until it has a width equal in extent to the diameter of the pipe. Under this arrangement the puff of the exhaust spreads out like a fan, and the discharge into the open air takes place gradully, the effect produced depending somewhat on the flare of the tube.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

BRITISH vs. AMERICAN FLOURS.

A PAPER read by Mr. Henry C. Kurtz before a late meeting of the British Millers' Association has been widely commented upon in the milling press both of Great Britain and America. The subject dealt with was "The Compulsory Grading of American Flour." Mr. Kurtz was firm in his conviction and clear in his statement as to the deterioration of American flour imported into Great Britain the past few years and the steady improvement in British flour. The comment regarding American flours is in these words: "In the days when we first received American flours the percentage of extraction was 30, 40, 50, or at the highest 60. I believe that to-day in the States there are high-class patents of 40 per cent. still made and sold, but as regards the British and more especially the London market the percentage is 65 at the best; we get patents at 75, 80, and even 90 per cent. Perhaps the mean lies between 70 and 80. The fact is there are many American flours now sold as patents which a few years ago would have been classed as 'straight grade.'" The practice Mr. Kurtz does not hesitate to denounce as dishonest. Bakers of wide experience from the north, south, east and west, says the British Miller, all expressed themselves to this effect. Mr. Arundel, of Birmingham, the respected treasurer of the Association, who has the reputation of being one of the keenest men of business in the Midlands, observed that since he had taken to blending his own flours he had used a much smaller proportion of foreign-made goods, and had given at least equal satisfaction to his customers. His second quality bread (for which he had a large sale) was made entirely from British products; if his top-price loaves contained one-fourth to one-fifth of American patents, he had doubts about the necessity of their presence. Mr. Fletcher, another eminent Birmingham baker, and Mr. Coates, of Hanley, were just as emphatic in their testimony to the improvement in home-milled flours. The deterioration, to use the word employed in this debate, is in the nature of things; for apart from any question of the retrocession of the hard wheat belt, it is clear that the flours which conquered for America her position on the British market were the advanced guard, and, as such, had been carefully selected for their quality. The main body could not be expected to maintain that high standard throughout. Such unequivocal testimony to the improvement in native millers' products is deemed most gratifying.

BRITISH FLOUR MARKETS.

The bright side of the shield, so far as British flour markets are concerned, is still kept invisible. Flour is in the words of the London Miller still a shrinking value. "This is especially true," our English cotemporary says, "of American grades and brands. A few days ago a well-known spring patent was landed in London docks and sold at the moderate price of 22s. a sack. There is indeed a scarcity of one high-class brand, but even in this case it is probable that orders would be booked at 25s. At present is the London market so well stocked that any figure above that price the holders of the choicest American patents find the greatest difficulty in selling. An excellent patent can now be bought in London for 23s. to 23s. 6d., while the supply of lower qualities is heavy enough to promise low prices for many days yet. All things considered, it cannot be said that the London milling trade fails to hold its own; although the metropolis is fairly inundated with flour, foreign and British, its mills are by no means as they were in the spring of 1887. It is a remarkable fact that the level of value for town whites and households is distinctly above that of the corresponding American brands. Apparently a limit has been reached in London for the use of American flour; when that result is once passed the inevitable result is a dragging sale and drooping prices. It would, however, be a great mistake to reckon Minneapolis or Milwaukee as the only serious competitors on the London miller. Perhaps at no time has a greater volume of flour been week by week poured into the metropolis; from quiet villages and great centres of industry there is a constant stream of sacks of all qualities. What is termed "sound country flour" may be readily purchased at 20s. to 20s. 6d., while some choice flours combining color and strength in the highest degree find a steady but not over-brisk sale at 23s. to 23s. 6d."

FLOUR MILLING IN JAPAN.

In a recent issue of the London and China Telegraph, the following account of the flour milling industry is given: A new industry has appeared in the Nagasaki in the form of the steam roller flour mill, which has been running now for two years, being about the only mill of the kind east of Penang. The inception of this industry is due to a few of the energetic old residents of Nagasaki, who fancied they saw a good chance of making it pay. Plans were prepared, the necessary capital was raised, the co-operation of eminent Japanese business men was secured, the buildings erected and fitted up with machinery which embraced the very latest English, American and Australian patents and improvements, being constructed on the Hungarian roller principle. A visitor to the mill is at once struck by the cleanliness and comparative quiet of the establishment. There is scarcely a trace of flour dust to be seen, and there seems to be a strange absence of operatives, as the machinery is automatic, and very little manual labor required. On the first floor may be seen a native feeding the machine with the grain from sacks just as it arrives from the country, and on the ground floor may be seen another native workman disposing of sacks of flour which have been automatically filled to an exact weight by the machine, after the shoot has been fitted with an empty sack by a native woman. So that with the exception of an engineer in charge and an assistant engaged in oiling the machinery, the three natives above referred to are the only persons engaged in the process of making the flour. Dirt and extraneous matter is separated from the grain and disappears in one direction, sharps and bran in others, and three qualities of flour in yet others, till it reaches the sacks. The mill is lighted by electric light, and work is kept up continuously for 18 hours a day, the output averaging during that time 475 quarter sacks of flour, 17 piculs of sharps, and 70 piculs of bran. The flour is made from Japanese wheat only, and is remarkable for its strength and for the sweet and excellent bread that results from its use. Experience has proved that most excellent bread is made from a mixture of Californian (Sperry) and Nagasaki flour, which also gives in making an increase to 40 per cent. The French fleet use the Nagasaki flour, which in itself is no slight recommendation, and it is very largely in use in Yokohama and Hong Kong, where its quality is highly appreciated. The sharps and bran also find a ready sale at Yokohama and Hong Kong.

SHIPMENTS TO THE WEST INDIES.

We shall hope that millers, anxious to see an extension of Canadian flour markets abroad, have read with care the report of Secretary Watts, in the August CANADIAN MILLER, giving very fully particulars of the conditions of the flour trade in the West Indies. The report shows, beyond any doubt, that the people of these islands are considerable consumers of flour. They import from America, but the United States, and not Canada, has received the lion's share of their trade. The reasons for this, and suggestions how to secure a share of this trade for Canada, are clearly stated by Mr. Watts in his report. By unanimously confirming the report, which had been made a report of the Executive, millers of Canada have given their assent to the practicability of the plans proposed. Are they prepared to go further and put these plans into execution?

We refer to the matter here because, to quote from the address of Mr. N. H. Stevens, of Chatham, when discussing the subject of "Competition in Flour Selling," a remedy for the present over-production and depressed condition of the Canadian flour market is in extending this market abroad. Mr. Stevens had himself found a profitable outlet for part of his product in the West Indies. Why not others? We are pleased to add here that Mr. R. Noble, of Norval, who has lately, through a visit of his son, made an investigation of these markets, is now preparing a shipment of 300 barrels of flour for the West Indies. Recognizing the suggestion frequently made in these columns that a good grade of barrel must be used in shipments to the Indies he is having the barrel made of solid oak, lined with paper, and of sufficient size to contain the full weight, and perfectly tight. On the ends of the barrels are attractive labels showing the style of the mills and where located, while on the side of each is a label on which are the words "New Crop," and a cut of the Union Jack having on its folds the word "Canada."

A NEWFOUNDLAND CRITIC.

A discussion of the annual meeting of the Dominion Millers' Association was that led by Mr. W. H. Meldrum, of Peterboro, on "Unreliable Dealers and Brokers." The remarks made and the decision reached to formulate a scheme modelled somewhat after a plan in vogue with Michigan millers has brought us a clearly written letter from Mr. G. C. Fearn, of St. John's, Nfld., a well-known flour-handler of the sister colony, and a dealer who keeps himself in touch with Canadian milling affairs by perusing, evidently with care, his copy of the CANADIAN MILLER. The old saw has it, that there are two sides to every story, and Mr. Fearn gives, what he believes to be, the buyers' side of the story in this case. The letter reads:

There appears to have been a very useful meeting of the Dominion Millers' Association recently and among many subjects, that raised by Mr. Meldrum re "Unreliable dealers and Brokers" is perhaps of the greatest value. I do not deny that in some cases millers have just ground for complaining of sharp practice by some of their consignees, but in the great majority of cases the complaints of a receiver is a just one and the refusal of a shipment or of drafts are the only means the receiver has of obtaining a recognition of his claims. A miller may honestly regard a shipment as equal to sample or as equal to a previous shipment; it may be a shade off in color and have increased strength, or vice versa, but this is not what the buyer wants. Buyers in this colony want flours to follow on as they begin, so that the bread will be of the same color and the dough require only the same care. If millers don't want complaints they must not put in spring or red where they have been using white wheat; don't let them use any of the little tricks so common to some millers. If a miller does so and then has his drafts refused, he, of course, forgets what he did and only points to the buyer as a man unworthy of confidence. Some of the Canadian millers are very reliable for regularity of quality; it is true that their prices are 10 or 20 cents per barrel more than the keen "cut throat" competitor, but the "deals" are alike satisfactory to the miller, the wholesale and retail dealer and the consumer. I could tell you, Mr. Editor, of many shameful tricks played by millers on the people of this town, but it is unnecessary. There are two sides to every story and we, in Newfoundland, have very frequently most excellent reasons for rejecting shipments. Let your tribunal for enquiring into these matters be a just one, so that the receiver may be able to submit samples of rejected parcels with a statement of his view of the matter, and if then the miller be found in fault and will not make proper redress let him be blackballed and not the receiver.

GREAT BRITAIN.

[Special correspondence CANADIAN MILLER.]

IN my June letter I finished with an expression that in my next I would give a few hints how the export flour trade can be done with success. Well, circumstances since then have made that last word an impossibility, unless the Canadian miller can buy his wheat equally as cheap as his competitors in the United States and Great Britain. So at the commencement of this letter I will give you a fair calculation what the word equally means: As a rule look at the price of red winter wheat in New York (which now stands about 68 cents a bushel). To compete with flour from this wheat you must buy wheat in western Ontario at 10 cents per bushel under New

York prices, as it will cost the Ontario miller equal that in freight alone to put his flour on the British markets; and as a rule the wheat exporter seldom touches Ontario winter wheat till he can buy it 10 cents under New York prices, and sometimes he is compelled to see a wider difference than that ere he can operate with a profit.

Supposing circumstances transpire so the miller can buy his raw material equally as cheap as his competitors, the next thing is to find a point where such winter wheat flour as Ontario wheats produce is required. To a large extent Scotland and Ireland are the points now. The Irish trade is largely done through Liverpool and Glasgow houses, many of those houses having their own agents and branch offices in Belfast, Dublin and other places. Sometimes they buy for shipment direct to Irish parts, but more generally to Liverpool and Glasgow, for there are so many vessels trading from those parts direct to Irish parts, that sometimes a cut rate is obtained on those vessels of 60 cents per ton, or about 3 cents per 100 pounds, giving the Liverpool and Glasgow importer an advantage over the Ontario miller shipping direct to Irish parts; hence it is an important matter in making a flour connection here for a large trade that the Ontario miller should be connected with a house having direct Irish connections, as well as English and Scotch trade. For small millers desiring connections for small lots regularly, this is not as important as for those who desire to do a large export trade in flour. Let me say just here, so far as oatmeal is concerned, Ireland and extreme north of Scotland desire pin-head oatmeal; Liverpool, coarse cut standard; and Glasgow a fine cut standard; in all cases these must be perfectly clear of any barley meal. Another very important point (when put up in cotton) is a strong package, when 140 lb. sack a sack weighing less than 8 ounces is very unsafe, and not only hurts the reputation of the brand, but is the cause of nearly all the reclamation for short weights. Some of the Irish trade require it put up in 98 lb. packages, but allow me to say such 98 lb. cotton bags as are usually used for Quebec trade won't do at all for export. The additional rough handling before it arrives to consumer's home requires nearly as strong cotton as the 140 lb. sack. I am selling a very favorable winter patent now for Ireland and the reputation of the brand has been seriously hurt by too light a bag. If millers consider their own interests they will be careful on this point.

But the important point (the foregoing being attended to) is the grade and quality of flour to make for such markets, as will take our Ontario winter patents. Well, for those who have got a reputation for their 90 per cent. patents, perhaps it is best to continue that, but for those starting a new trade it is far better to get clean out of the way of straight and 90 patents. The market is crowded with those grades—both English and Ontario—and the middle flours, called Extra Fancies, from the United States, come into competition with those grades too, and now when all grades are so cheap, there is a strong trend with consumers to go into better and higher grades, and the demand for Ontario flours are for a white 80 patent; if you take of 25 per cent. low grade all the better, especially this year, as the demand for feed will likely give you the first cost of the wheat itself for your low grades. Another incentive to higher grades is that the price of low grades from 90 patents is only 13s. for 280 lbs., or equal to $1.12 per 100, c.i.f., here, while the low grades from 75 to 80 per cent., winter patents dressed up nice and white is worth 16s. to 16s. 6d. per 280 lbs., equal to $1.40 per 100, c.i.f., and there seems to be a fair demand for the whiter low grade for biscuit purposes.

Let no miller be carried away with the idea that he can dress up his 90 patent and pass it off as 80 patent; it may look as white in the dry, but all flour here is tested either by baking or under a water test and if the red dog is in it, it turns yellow under the water test every time. The only way to get a 90 patent white is to leave 10 per cent. of low grade in the bran and then take 10 per cent. out of the balance and if bran is over $12 a ton this is not a bad plan; anyhow so long as flour is so very cheap it will be best to ship high grades.

DAVID PLEWES.

LIVERPOOL, Eng., Sept. 2, 1893.

A CONSUMING TOPIC.

SOME one in Germany has lately revived the old idea of using coal in the pulverized form for the prevention of smoke. This idea comes up at frequent intervals, but never amounts to anything except considerable talk on the subject. The frequency with which this plan is advanced shows the desirability of smokeless combustion, but as there are numerous devices on the market at the present time, which, if applied and intelligently handled, will give smokeless combustion with soft coal, there is no necessity for a scheme which involves the handling of the fuel three or four times more than at present.

Office of the CANADIAN MILLER,
September 15, 1893.

THE GENERAL SURVEY.

THE wheat situation shows no immediate signs of improvement. Prices continue low. A share of the depression is due, no doubt, to the general depression that has overshadowed every branch of trade in the United States for some months, and the hope is entertained, now that the Sherman silver bill has been repealed, that an improvement will take place. This, however, has to be remembered that prices for wheat were low before this depression had seriously affected trade, and more than any revival of general business that will come from the action of Congress in the line of financial legislation will be needed to materially increase the price of wheat.

It is only a negative force, but there is something to expect from the statement that prices are so very low, as some have put it actually below cost of production, that in the natural course of affairs a reaction is quite certain. President Van Horne, of the C.P.R., stakes his reputation as a prophet on a certain increase of prices in the near future and advises farmers of the Northwest to hold their wheat, rather than sell at prevailing prices. The big railway magnate, with his opportunities of studying conditions, ought to know something of the probabilities of wheat, and yet because of his means of knowing, and because a railway magnate, it may seem necessary to take his statements 'cum grano salis'.

The situation in respect to price is in some respects remarkable, and has given rise to not a little speculation and discussion. Economists reason that too bountiful harvests are really the cause of depression. Times are hard and farming unprofitable because there is too much wheat in the world. But strange as this may seem, says one writer, the theory that an overplus of breadstuffs does produce a world of suffering is not grounded on mere speculation. Prior to 1875 the increase in the world's wheat growing acreage just kept pace with the world's wheat-consuming population. In the years between 1866 and 1875 the price of English grown wheat in the English market varied 29 cents a bushel. In the next decade the world's wheat bearing area increased faster than the world's population. There was an addition of five per cent. to the world's wheat growing acreage. As a result the average price of wheat per bushel in the ten years immediately succeeding 1875 was $1.20 against an average of $1.66 for the decade prior to 1875. As the New York Sun says, a new State was ploughed up and seeded down in wheat in each of the five years between 1874 and 1879. In the five years from 1874 to 1879 nearly one-half (47 per cent.) was added to the productive power of the farms of the United States, while the population increased about 14 per cent. In the fifteen years ending with 1884, the additions aggregated 97,000,000 acres and equalled 99 per cent., while the population increased only 45 per cent. Is it any wonder that prices, for all agricultural products fell?" The practical exhaustion of the unoccupied arable lands of the United States arrested the disproportionate growth of wheat acreage five years ago. Prices would then have advanced if time had not been needed for the growth of population to adjust the difference between the world's wheat producing and world's wheat consuming power. This adjustment was effected in 1890 and when prices might have been expected to rise with average crops the market was swamped with the great crops of 1891-92, each of which was at least 170,000,000 bushels in excess of the average. The Sun argues that high priced wheat and good times will come so soon as the wheat reserves now in the world's granaries are exhausted. "The world's wheat area," it says, "with average yields, being now deficient by more than 12,000,000 acres, an average harvest will produce but 2,280,000,000 bushels, while the requirements are now 2,440,000,000, and augumenting at the rate of more than 27,400,000 bushels per annum—the equivalent of 2,300,000 new acres. Therefore, we may expect prices to advance to a remunerative level just as soon as existing reserves shall have been consumed."

Getting away from the mere theoretical to conditions as they exist to-day there is reason to expect that prices will improve. One cannot write with perfect certainty from the data immediately collectable, but so far as the outlook appears there will be a shortage of wheat abroad; the crop of the United States and Canada will fall below that of the past two years, and a large exportation of wheat will necessarily take place from America. The London Times of August 28 says that Great Britain will be more than ever dependent on foreign supplies, and will require at least 224,000,000 bushels of wheat from abroad. France, it adds, must import more than twice as much as she usually does. Germany has already begun to draw on the American market for supplies. When nations thus bid against each other, the article says, there is a fair chance that prices will advance. The increase may not be large; but it will represent an acceptable improvement.

CURRENT PRICES OF BREADSTUFFS.

WHEAT: The Central Wheat Buyer, of the Dominion Millers' Association, reports under date of Sept. 11. "For September: Chicago, 67⅓c.; New York, 72⅜c.; Toledo, 67¼c.; St. Paul, 62⅝c.; Duluth, 65c. for No. 1 northern, and 67¼c. for No. 1 hard. Hardly any Ontario wheat offering. Holders 61c. western freights for old red and mixed fall; Manitoba No. 2 hard, 74½c. west and 75½c. east delivered." A Chicago despatch of 12th from Schwartz, Dupee & McCormack says: "Cables were strong. Cash demand for low grades continues good. North-western receipts were larger than a year ago. The contract stock here is over 16,500,000 bush., which shows an increase for the week. Receipts in St. Louis and Kansas were also liberal. The strength of the market was a surprise to both bulls and bears. It is four months since we have had a market that has held its advance for over a day, but the principle factors that have caused the depression during that period have apparently disappeared, for the present at any rate. We refer to the long succession of failures and big liquidation of long wheat prior to September 1. Whether all to-day's advances will hold remains to be seen. We think, however, that the general sentiment favors the bull side and on reactions the market finds liberal support." On the Toronto market holders were asking 62c. for red and white wheat. Spring sold on the northern at 58c. Goose was nominal. No. 2 hard is wanted at 75c. west.

BARLEY: Nominally unchanged. A slight enquiry for old stuff for feed at 37c. outside.

OATS: Steady. New oats west at 30c.; old oats on track quoted at 35c.

PEAS: Holding firm. Selling at 53 to 54c.

THE FLOUR MARKET.

FLOUR, if anything, is somewhat steadier, with a fair demand for supplies from the east. Montreal reports a slight improvement with prices fairly firm. The Northwestern Miller, of Minneapolis, says: "Under the stimulus of higher wheat, there has been an appreciable improvement in the demand for flour, and millers are strongly hopeful of doing a better business from this on. The change mainly applies to the domestic trade. The large visible stocks of bread-stuffs in the United Kingdom exercise a most depressing influence in that quarter, and cheaper grains now available from other exporting countries, particularly Russia, only intensify this feeling. In this country, money matters being easier, buyers, feeling that prices are at bed rock, are more inclined to take hold. Millers could sell much more freely did they not insist on quick returns and that the flour be taken at once. Foreigners usually bid too low to promote trading. They want bakers' more than any other grade, but some millers require that a certain proportion of patent be taken with bakers', and quotations on the latter are firmer. Low freight rates, both inland and ocean, have been helping the miller out considerably, though the increasing cost of cash wheat is now largely swallowing up the advantage gained on rates. There is a good call for red dog as feed, and prices are strong.

PRICES OF FLOUR AND MEALS.

Toronto—Car prices are: Flour (Toronto freights)—Manitoba patents, $3.80 to $4; Manitoba strong bakers', $3.60 to $3.70; Ontario patents, $3.10 to $3,30; straight roller, $3 to $3.05; extra, $2.50 to $2.75; low grades per bag, 90c. to $1.10. Bran—$12.50 to $13. Shorts—$16.50 to $17.50.

Montreal—Flour: Winter wheat, $3.90 to $4.10; Manitoba patents, best brands, $3.80 to $3.90; straight roller, $3.10 to $3.15; extra, $2.90 to $3.05; superfine, $2.60 to $2.90; Manitoba strong bakers', $3.65; Manitoba strong bakers', best brand, $3.65 to $3.70. The oatmeal market does not show any change. The demand is only fair, but the supply is small, and prices hold steady. Standard, $2.10 to $2.15; standard, bbls., $2.30 to $2.35; granulated, bags, $2.15; granulated, bbls. $2.35; rolled oats, bags, $2.20; rolled oats, bbls, $4.50 to $4.60. The feed market holds firm under a light supply. Sales are noted for four cars of bran at the outside figures. Bran, $15 to $16; shorts, $17 to $19; mouillie, $22.

A SAFEGUARD.

WHEN the water is found to affect the boiler plates only in particular places, as at the water-level, it is well to use thicker plates at such places, and to arrange them so that the seams do not come within the region attacked by the water.

WHEREVER I can find a pointer that would seem to be valuable to MILLER readers, I lay hold of it. The other day I came across the following in the St. Louis Miller, which is supported by a bit of experience, that gives it additional weight: "A great many millers are adopting the plan of putting their grinding stock through another cleaning operation after it is thoroughly steamed and heated. It seems that the steaming and heating curls up a certain amount of thin, soft bran coating on the berry and thus enables the following scouring process to take off what previous machines cannot reach. A miller tells us that he "tried the experiment by putting a second hand 'cast out machine' on his grinding stock after it was steamed and heated, and just as it had previously gone to the rolls, and he immediately discovered an improvement in his flour; and," continued he, "I have taken this machine off, for curiosity, and found that my flour at once went down. I turned the cleanings into a separate dust collector, and the stream of soft pulverizable bran thus brought to view is astonishing. I could not be easily hired to abandon this plan."

* * * *

A gentleman riding through a pine waste some years ago overtook a young man whose sack of corn under him on the farm horse he rode, gave evidence that he was bound for the gristmill. Some conversation between the two developed the fact that the young man was the son of the author of a popular almanac. The gentleman asked the young man jocosely, "And do you ever make calculations upon the weather like those for which your father is so celebrated?" "Oh yes," he replied readily. "And how do your calculations agree with your father's?" inquired the gentleman. "Very well indeed," replied the young man. "We are not more than one day apart in our reckoning." "Why that is wonderful, certainly!" exclaimed the gentleman. "Only one day's difference?" "Yes," said he, with a twinkle in his eye; "he can always tell the day before when it is going to rain and I can always tell the day afterward?"

* * * *

"Hold on to your wheat" is the slogan sounded by President Van Horne, of the Canadian Pacific, in reply to a communication from the Board of Trade, Portage la Prairie, Man., regarding reductions in wheat carrying rates. The railway magnate says: "There is nothing in the stocks of wheat in sight, no, nor developments in production of wheat; nothing but the lack of money for handling wheat to justify anything like excessively low prices, and almost every grain operator and miller and speculator within my acquaintance and beyond, as far as I can learn, believes that a great profit is to be made in buying wheat at present prices, and there will be a scramble for it as soon as money is to be had for the purpose. The prices cannot within reason go lower; the chances the other way are infinite. Our farmers will risk practically nothing in holding their wheat, or as much of it as they can, and if they are not able to make money by it I will resign as a prophet and take another look at the rates."

* * * *

Mr. W. W. Ogilvie, the miller king of Canada, has had samples of new Manitoba wheat on view in the Board of Trade, Montreal. They have been inspected with much interest by members of the Corn Exchange. The samples from the Mennonite district, which district is 25 miles by 40 miles, Mr. Ogilvie says, are the best that have been grown there for many years. The samples from the southwest of Manitoba are also very fine, but smaller in berry to the west of the Province. Those from Portage du Plain are also very fine, but are the only ones that show any sign of smut. Mr. Ogilvie said that in his opinion the crop would be the best in quality Manitoba had ever grown. He estimated the yield at twenty bushels per acre, which, in that country, would represent about 19,000,000 of bushels. This opinion, I notice, is not shared in by all of Mr. Ogilvie's associates on the Montreal 'Change. Some of the members were inclined to the belief that the "miller king" was not warranted in making the predictions he did as to the quality and quantity of the Manitoba crop. One gentleman in a group stated that judging from the samples of wheat on view the yield would not be greater than about thirteen or fourteen million bushels at the most. Another remarked that it was all very well to "boom" the country, but he believed in the state of the crops being fairly represented. The secretary of the Winnipeg Board of Trade in a letter to Mr. Wills, of the Toronto Board, a fortnight ago, said that between sixty and seventy per cent. of the grain in Manitoba was cut at that time and free from frost.

* * * *

Supt. Whyte said, when questioned regarding the building of the C. P. R. grain elevator at Winnipeg: "We have decided to build at once. The conditions of the crop to-day warrants it. Last year there was not sufficient storage accommodation at Fort William, and it was necessary to furnish more accommodation either there or at Winnipeg. The company have decided for the latter, as it will suit the trade better. In addition to further storage it will provide a cleaning and sorting elevator, for which a large section of the grain trade have been agitating for some time. The location is not actually settled yet, but will probably be at the west end of the yards. We have already received the foundation plans. No piles will be sunk, but it will be one foot and a half concrete bound together with old rails. On this will be built seven foot masonry piers. The capacity has not yet been determined, and will not be until the plans for the super-structure are received. Complete plans are expected in a day or two. The intention is to have it ready for this year's crop, so work will be started immediately. It has not yet been decided whether the work will be by contract or day work."

* * * *

"Manitoba is the garden of the world for wheat" is the way Mr. Thos. Graham, of the well-known Rock farm, Nepean, and who has recently returned to Ottawa from an extended trip through Manitoba and the west, enthuses over that western country. "It is a paradise for young men with lots of Canadian pluck." Mr. Graham first visited the Deloraine district, Southern Manitoba. Here he found that despite the fact there had been a rather severe drought this summer, the crops were in fine condition. The lowest average yield of wheat in this district was from 18 to 20 bushels to the acre. There had been no frost, and, when he left, over 90 per cent. of the grain had been harvested. All was A No. 1 hard Manitoba. He then proceeded to Dakota. The northern half he found to be an excellent wheat country, and, in fact, until he saw the Portage la Prairie country, some days after, was inclined to give it the palm. Its wheat fields averaged 18 to 20 bushels. South Dakota presented a fearful contrast, however. Drought was continually making the farmers' labor go for naught, and now they were so disheartened that all who could were emigrating to Manitoba and the Northwest. Around Brandon he saw the neatest, cleanest tillage he ever saw. There was a decided air of thrift and success in the entire vicinity. Harvesting operations were being rushed and the average yield of wheat was 20 to 22 bushels per acre. Frequently 100 acres were cut in a single day by one man and six horses. It was done, though, by attaching a lantern to the pole of the binder and working till perhaps three o'clock in the morning. This was done to avoid the danger of frost, as experience proves that grain which is cut and cocked suffers very little from frost.

* * * *

"To take a correct view of the prevailing depression in wheat," said a prominent Montreal grain merchant, "it is necessary to consider the crops of the previous two years. The crop of 1891 was the largest wheat crop this country ever produced, amounting to over 600,000,000 bushels. The crop of 1892 was a fair average, of say, 500,000,000 bushels, according to the United States Government estimate which, until the lying, deceiving nature of this report was fully known, merchants and others put great confidence in. It has now been proved beyond any doubt that these Government 'reports' have been considerably underestimating the crops—perhaps having been misled by the farmers, who imagined that by giving out they had only five hundred bushels of wheat when they had really one thousand might enhance the value to their benefit. But the farmers' deliveries kept up with astonishing liberality, and the trade was burdened with an enormous visible supply, which kept increasing instead of diminishing, and which at the present time is so large that it exercises about the same effect on the market that a mill-stone would around the neck of a drowning man. The price of wheat is very low—lower than ever before—the visible supply is large, larger than ever before, and a new crop right at hand ready for market. Exports are very heavy; fortunately for us there is a good demand for our wheat from Europe and every wheat exporting country seems about as willing as ourselves to supply that demand at present prices as fast as ships can carry it. This being so, is there any reason why the United Kingdom or the continent should increase their limits, still every man one meets is a 'bull' on wheat, and perhaps they are right, as when an article gets below its value, below what it costs to produce it, it will come all right some day."

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THE NEWS.

CANADA.

—Copeland's roller mill, at Elmsvale, Ont., is doing a lively trade.

—W. L. Griffith, of Emerson, Man., is building an elevator of 25,000 bushels capacity.

—Chalmers & Bethune have put a steam engine in their elevator at Pilot Mound, Man.

—McLaren's grist mill at the Peche, on the Ottawa, has been undergoing extensive repairs.

—The people of Whitewood, Man., where they have a good roller mill, are agitating for an elevator.

—Phillips & Richardson, of Portage la Prairie, Man., will build an elevator at Oakville, Man.

—Pincombe's oatmeal mill at Strathroy, Ont., was destroyed by fire Aug. 25. Loss, $10,000; insurance, $6,000.

—The sum of $80,000 is said to have been expended on the recent remodelling of the Ogilvie mill, Winnipeg, Man.

—The report comes from the Galt seed fair that the samples of wheat were not so good in general as they were last year.

—Peter Smith, millwright, with D. Goldie, of Ayr, Ont., is suffering from a fractured arm obtained while cogging a wheel.

—Martin & Warnock, of Ottawa, Ont., are finding a ready sale for the output of their mill. The capacity is 200 barrels of flour daily.

—The flour mill, elevator and engine house of the Bell farm at Indian Head, N.W.T., was destroyed by fire on Sept. 7. Loss $25,000.

—The Duart roller flouring mill, owned by A. J. O'Brien & Co., was destroyed by fire along with a large quantity of wheat and flour on 17th August.

—The new C. P. R. grain tariff for Manitoba and the Northwest has been announced. There is a reduction varying from one to nine cents per hundred.

—The liabilities of J. J. Brown, grain, etc., Barrie, Ont., are $12,000 and assets $16,000, the latter consisting of real estate, stock, sawmill and book accounts.

—The Peoples' Mills, Guelph, Ont., the property of Mr. Jas. Goldie, have just been fitted with new machinery, all made by Goldie & McCulloch, of Galt.

—An employe of the Thompson oatmeal mills, London, Ont., was caught in the belting and painfully injured, a large piece of flesh being torn from one arm.

—There is still in Fort William elevators 1,250,000 bushels of old wheat, which the holders are shipping out as rapidly as possible in anticipation of the early rush of this season's crop.

—A report from South Oxford says wheat in that neighborhood will not yield more than 20 bushels to the acre, while in many instances it has been so damaged by rust that farmers are feeding it to their hogs.

—The farmers' elevator at Griswold, Man., containing 25,000 bushels of new wheat, just stored by farmers of the district, was totally destroyed by fire on 11th inst. The elevator was insured, but the wheat was not.

—The credit of making the best flour in the world belongs to the Holland Milling Co., of Holland, Man. The Holland Co. sent an exhibit of its flour to the Columbian exposition which was awarded first prize by the exposition judges.

—The Winnipeg papers are waging war against the high prices charged for bread by the bakers of the Prairie city. The first victory scored brought the price down from 14 to 16 loaves for $1. Then 18 two-pound loaves were given for $1. The demand is for 20 loaves for 100 cents, and the papers say they will get there.

—Owen McDonnell, jr., a well-known flour and feed dealer, of Montreal, Que., died at Benoit, St. Joseph Asylum, Longue Pointe, on Aug. 28, as the result of an attempt at suicide while laboring under a severe attack of delirium tremens.

—C. N. Bell, secretary of the Grain Exchange, Winnipeg, Man., has been instructed by the department of inland revenue to take the necessary steps for the collection of grain samples from which to make the standards for this year.

—Leon Carrier, the Quebec embezzler, is, it appears, still at Denver, Col., and fighting extradition. He defies the prosecutors and it is impossible to find out where he has put the $20,000 he made by his sales of wheat that did not belong to him.

—A. Canning, formerly of Oil Springs, who was employed as teamster by Sutherland, Innes & Co., at their mills near Wheatley, Ont., while unloading a log, had his leg smashed so badly that it was necessary to amputate it above the knee.

—It is said that a certain farmer of Goderich township has stored in his barns the accumulation of nearly 7 year's wheat crop, which he has held from year to year with the expectation of a rise in prices. For some of his grain he was offered over $1 a bushel.

—A Sophiasburg farmer has said that the yield of barley in that township would not be over 10,000 bushels this year. The time was when the yield was 200,000 bushels. Sophiasburg is in Prince Edward county, once the premier barley county of the province.

—The large grist mill of David S. Clemens, at Winterbourne, Ont., was totally destroyed by fire a few weeks since. The fire started in the engine-house, no one knows how. The loss is about $15,000, with $5,000 insurance. It is not likely that the mill will be built again.

—The well-known milling firm of Meldrum & Davidson, of Peterboro, Ont., has been dissolved by the retirement of Mr. Davidson. The business will be carried on with increased efficiency by Mr. Meldrum, who intends refitting the mill and in other ways improving the business.

—The new farmers' flour mill at Portage la Prairie, Man., has just been completed at a cost of $20,000. The machinery was put in by the North American Mill Building Co., of Stratford. The mill will be run in connection with the farmers' elevator and Mr. James Numm will he head miller.

—The C.P.R. grain elevator at St. John, N.B., is now completed, and the new city wharf is also finished. The elevator has a capacity of 300,000 bushels or 9,000 tons of wheat, the lading of five steamships of average size. St. John will make a strong bid for the grain trade of the west this fall.

—The Farmers' Joint Stock Company's mill at Oxbon, Assa., has recently started. The machinery was furnished by John Abell and consists of 5 double sets of Wilford Roll Mill, 3 divided McAnulty scalpers, 3 Barnard air belt purifiers, Cranson's separators and scourers, 5 Abell improved flour bolts, 1 Abell automatic engine 12 x 30 with boiler. We understand the mill is doing excellent work.

—The bonus of $4,000 offered by three townships in the municipality of Oakland, Man., for the erection and operation of a flour mill of 150 barrels capacity, will be supplemented by $1,000 from the adjoining townships in Turtle Mountain and likely $1,000 from adjoining townships in South Cypress. Several practical millers are waiting the result of the vote in these districts to make a bid for the bonus, and there seems little doubt a mill will be in operation by the end of the year.

—The Oxford Roller Flour Mills and elevator, buildings and contents, were destroyed by fire on Aug. 22. The property is a total loss and was valued at $40,000, and was insured for $22,000. Walker, Harper & Co. were the proprietors. The origin of the fire is unknown, but is supposed to have started in the second story and spread very rapidly. The loss on the building will amount to about $30,000, on which there is about $13,000 insurance in the Millers and Manufacturers, the Phœnix, of London and the Phœnix, of Hartford. Mr. H. S. Moore, village postmaster, owned the mill, while it was operated by the firm of Walker, Harper & Co. The members of the firm are Mr. Moore and Mr. W. Walker, Mr. Harper having drawn out some two years ago, when he moved to Dundas. The partnership between Messrs. Moore and Walker, which was entered into nearly five years ago, expires some time this fall.

GENERAL.

—The elevator of the W. C. Fuhrer Milling Company, at Mount Vernon, Ind., was destroyed by fire on 11th inst. Loss, $100,000; partly insured.

—The Coatsworth elevator, situated on Michigan and Ganson streets, Buffalo, N.Y., having a capacity of 1,200,000 and valued at $750,000, was totally destroyed by fire the early days of August.

—On Sept. 4, the lake and rail rate on flour from Minneapolis to New York, via Milwaukee or Chicago was fixed at 22½ cents. This is the beginning of the annual rate war between lake, and rail and all-rail routes.

—Car receipts of grain at Duluth for the crop year ending August 31st, were 67,290 cars, of which 65,150 were wheat. Receipts by bushels were 41,000,000 of wheat. With one exception, this is the largest year on record.

—A late despatch from St. Paul, Minn., says: The big elevator companies of Minnesota having failed to make an agreement with the farmers and banks as to the method of moving the grain crop, have taken the bull by the horns and resolved themselves to push the crop to central markets as fast as possible. Ten elevators have been opened at Lake Crystal, Garden City, Vernon, Amboy, Elmore, Madelia, Brewster, Sheldon, Sioux Falls and Montrose. Twenty more will be opened immediately. The companies declare they have the promise of plenty of funds from eastern banks and will pay currency or certificates for all grain purchased.

PERSONAL.

Hon. Mackenzie Bowell, minister of Trade and Commerce, has left for Australia, commissioned by the government to see what can be done to extend trade between the two countries.

The MILLER has learned with deep regret of the death of Mr. G. C. Temple, of the Bank of British North America, Brantford, a son-in-law of Mr. A. H. Baird, of Paris, president of the Dominion Millers' Association.

Fred. W. Gibbs, formerly of Toronto, died a fortnight ago, of Bright's disease in the Presbyterian Hospital, New York. When in Toronto he was a partner in the grain firm of J. C. McLaughlin & Co. He was a son of the late Hon. T. N. Gibbs, of Oshawa.

Thos. Geeenwood, who died at Traverse City, Mich., the early part of August, was one of the first residents of Shelburne, Ont., and with his brother, Harvey Greenwood, now of Boissevain, Man., ran the first grist mill, which is now part of the Shelburne Roller Mills.

David Plewes, ex-secretary of the Dominion Millers' Association, and for upwards of a year representing a Canadian flour syndicate in England, is reported to have said to a visitor from Brantford that from personal observations made during his travels he considered that the farmers of Canada were the best circumstanced of any in the world.

A POLICY OF PATCH.

IN how many ways is the "penny wise and pound foolish" policy exercised. That something may answer for the time being is all that gives some people any consideration. According to the Millers' Review millers may be found guilty of this foolishness. They have a mania for patching and repairing, and patch, patch and repair is their delight. No matter how old, how badly worn and useless a machine may be, so long as the wood will hold a nail or a place can be found for inserting a bolt or a screw, it will be "fixed up" and made to do a while longer.

It would not matter so much if there were nothing involved but simply patching the machine or machinery, and the time of the mechanic in doing the work. But, as a rule, there is much more at stake. If a machine breaks down on account of old age, or for any other cause, the time of the mill is lost and its earning power stopped. The owner is therefore not only paying for the repairs of the machine, but is also losing what the mill would be earning if at work.

Frequent stops of this kind, on account of old and worn-out machines, add losses together very rapidly—enough in a little while to buy several new machines—and still the old ones are on hand to he again and again repaired at loss of time to the mill. The man that does it that way is penny wise and pound foolish. As soon as a machine is worn out and becomes decrepit with age, it should be replaced by a new one.

NO SMOKE.

A RECENT German invention for the purpose of preventing smoke when coal is used as fuel consists in reducing the coal to a powder and feeding this to the furnace with an air blast. The coal so prepared ignites at once upon entering the furnace and gives an intense flame. The dust does not fail, but floats in the furnace chamber and is entirely consumed. There are no ashes, and it is said there is no smoke from using coal in this shape. The fire can be regulated the same as when oil is used, and it can be started or extinguished at pleasure.

YOU ARE INVITED.

The Magnolia Metal Company, which sells its metal all over the world, extends to its friends an invitation to visit its exhibit at the World's Fair; it can be found at Section No. 10, column E 53, where all people who are interested in the running of machinery with the least amount of friction are most welcome.

Elmvale Chronicle: We advise everyone interested in flour and grain and the milling business to take the CANADIAN MILLER.

"How do you like your new dress?" asked the stone dresser of the burr. "Oh, it breaks me up," replied the burr.

EMBRO OATMEAL MILLS....

ROLLED OATS
STANDARD
—AND—
GRANULATED
OATMEAL

MADE FROM SELECTED WHITE OATS.

Special terms made with Flour Millers for re-shipment with carload flour.

D. R. ROSS EMBRO ONT.

MILLERS' & MANUFACTURERS' INS. CO.

ESTABLISHED - 1885

32 Church Street, Toronto

The President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said: I have much pleasure in drawing your attention to the fact that this company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

Up to the present time the insurers with this company have made a saving, when compared with the curreent exacted rates, of $91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to $21,522.72.

Besides achieving such result, we now also have, over all liabilities—including a re-insurance reserved (based on the Government standard of 50 per cent.—(50%), a cash surplus of 1.93 per cent. to the amount of risk in force.

Such results emphasize more strongly than any words I could add the very gratifying position this company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report.

The report was adopted, and the retiring Directors unanimously re-elected. The Board of Directors is now constituted as follows: James Goldie, Guelph, president; W. H. Howland, Toronto, vice-president; H. N. Baird, Toronto; Wm. Bell, Guelph; Hugh McCulloch, Galt; S. Neelon, St. Catharines; George Pattinson, Preston; W. H. Story, Acton; J. L. Spink, Toronto; A. Watts, Brantford; W. Wilson, Toronto.

HUGH SCOTT, Mgr. and Sec'y. **THOS. WALMSLEY,** Treasurer.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 27th of each month to insure insertion in the following issue.

TO MILLERS AND GRAIN EXPORTERS.—Advertiser wisbes to represent a good miller or grain merchant in the London market on commission; references exchanged. J. H. BAILEY, Sr., Brentford, London, England.

TO MILLERS

FOR SALE. "NATIONAL ROLLER MILLS," Brussels, Ont. Capacity 100 barrels per day. Cheap, easy terms of payment. Address "B. C.", P. O. Box 566, Toronto.

GRIST MILL FOR SALE

WATER POWER THREE SET MILL, NEW; satisfactory reasons for selling; also small fruit farm.

JNO. P. WEEKS, Hornings Mills, Ont.

FOR SALE

I OFFER A SEVENTY-FIVE BARREL ROLLER mill, very best modern machinery, engine and boiler complete, in best hard wheat region in the United States. Railroad point, near Manitoba boundary, and largely settled with Canadians. Excellent chance. I own by accident, and sell because not a miller. Terms easy.

C. M. HERTIG, Box 382, Minneapolis, Minn.

FOR SALE.

A LIMITED QUANTITY OF HICKORY half-round hoops, suitable for barrels for the West India trade. Inquire of

JOHN CAMPBELL, Erie Mills, St. Thomas, Ont.

FOR SALE

BUCK WHEAT FLOUR MACHINERY, ONLY run two years, reason for selling, want of room. Machinery can be seen running. Will take buck wheat flour in payment.

Apply to JOHN MACKAY, Caledonian Mills, Bowmanville.

Mineral Wool Pipe and Boiler Covering

If you want to save fuel . . . . . } USE MINERAL WOOL SECTIONAL COVERING.
" " " dry steam at long distance . .
" " to prevent condensation . . .
" " " " cold water pipes from dripping
" " " " " " freezing

THE best non-conductor is the cheapest covering. Mineral Wool heads the list as a fire-proof non-conductor. Hand pressed coverings are poor non-conductors, and are therefore the most expensive in the end.

A good pipe covering is one of your best investments. It is false economy to have uncovered pipes, as you are just paying the coal man what the covering man should have, and only ashes to shew for it. Give the matter your consideration, it means money to you.

We also carry full lines of Asbestos Goods, and Mineral Wool for fire-proofing, deadening of sound, insulation, etc., etc. Send for Pamphlet.

CANADIAN MINERAL WOOL CO. LTD., - 126 BAY ST., TORONTO

IMPORTANT TO MILLERS

LIBERAL CASH BONUS, FREE SITE, R.R. switch, etc., offered to a practical man who will erect and operate a grist and flouring mill at Wawanesa, Man.

Location one of the best in Manitoba.

Correspondence invited.

JOS. CORNELL, Sec'y of Ratepayers' Committee.

TO MILLERS

FOR SALE

"NATIONAL ROLLER MILLS," BRUSSELS, Ont.; capacity 100 barrels per day. Cheap, easy terms of payment. Address

"B.C.," P.O. Box 566, Toronto.

FLOUR, GRAIN AND COMMISSION MERCHANTS AND BROKERS

The Canadian Miller will not knowingly publish the cards of irresponsible parties. So far as we know, the following firms are thoroughly reliable.

THOMAS McLAUGHLIN

FLOUR and GRAIN DEALER

BOARD OF TRADE BUILDING

TORONTO

EASTERN AGENCY:

50 St. Paul Street

QUEBEC

G. K. MORROW, MANAGER.

C. GOODE

GRAIN and COMMISSION Merchant

ONTARIO AND MANITOBA WHEATS IN CAR LOTS

Consignments promptly attended to

62 FRONT STREET EAST

TORONTO

ESTABLISHED 1859

WM. GALBRAITH

Commission Merchant

Flour and Grain

48 Front Street E.

TORONTO

J. F. McLaughlin

FLOUR, GRAIN MILLFEED

WHOLESALE

Send large samples and quote prices . . . .

MANITOBA WHEAT FOR SALE

Rooms 511 and 512 Board of Trade

. . Toronto

STARK BROS. & CO.

BOARD OF TRADE BUILDING

. . TORONTO . .

GRAIN DEALERS

Specialties:

MANITOBA WHEAT

MILLFEED

AND COARSE GRAINS

Peer & Company

Flour and Grain Merchants

BOARD OF TRADE BUILDING

TORONTO

LAWRENCE COFFEE THOMAS FLYNN

ESTABLISHED 1845

L. Coffee & Co.

Grain and Commission Merchants

38 Church Street

TORONTO

BRANDS:

STAR : LINCOLN
CROWN
RED CROSS
CLYDE MILLS
SPARKLING RIVER

Unsurpassed for Uniform Quality

GREENFIELD MILLS + AYR, ONT.

D. GOLDIE, Prop.

Daily Capacity 500 Barrels

JORDAN CHAMBERS
W. J. Kramer,
DESIGNER & ENGRAVER ON WOOD
TORONTO ONT

3½ Cents a day—

That isn't much money, is it?

About twenty-five cents a week or so.

And a man must be pretty hard up if he hasn't that much to spend every week.

Times are hard, they say; but if they are hard now to your family and yourself, what will they be to your family without you?

That's worth thinking about.

We think that no man should be without life insurance when it can be had at such a low rate as 3½ cents a day from the Manufacturers' Life, Yonge Street, corner Colborne, Toronto.

Write to us and we will give you all particulars.

ROBIN & SADLER
MANUFACTURERS OF
Leather Belting
SPECIALTIES
DYNAMO BELTS
WATERPROOF BELTING
MONTREAL 2518 & 2520 NOTRE DAME ST.
TORONTO 129 BAY ST.
☞ Send for sample of our new SAWMILL BELT ☜

Royal Mills, capacity 1,800 bb
City Mills, 1,100 bbls.
Glenora Mills, 1,200 bbls.
Goderich Mills, 1,200 bbls.
Seaforth Mills, 600 bbls.
Winnipeg Mills, 1,200 bbls.

DAILY CAPACITY
7,100 BBLS.

HIGHEST QUALITY

Hungarian Patents
AND
Strong Bakers'
FLOUR

FIRST PRIZE, DIPLOMA AND GOLD MEDAL, EXHIBITION, JAMAICA : : : :

W. W. OGILVIE
PROPRIETOR

HEAD OFFICE:
MONTREAL, QUE.

Stave and Heading Manufacturers

....READ....

CHATHAM, ONT., August 25th, 1893.

A. G. MORTIMER, ESQ.,
Manager Dominion Dry Kiln Co.,
Toronto, Ont.

DEAR SIR,

The "Andrews" dry kiln which I purchased from you has now been in operation over a month, and is so perfectly satisfactory that I cannot say enough in its favor.

I use very little steam and my staves come out as dry as a bone, and are not in any way injured by warping or discoloration.

Yours, truly,

(Signed), N. H. STEVENS.

What we have done for Mr. Stevens we can do for you

WRITE FOR CIRCULARS AND FULL INFORMATION TO

THE DOMINION DRY KILN CO.

TORONTO, ONT.

A POOR THING IS DEAR AT ANY PRICE

THAT IS WHY IT PAYS BEST TO PROCURE

... THE GENUINE ...

DUFOUR & CO'S BOLTING CLOTH

... IT IS THE BEST IN THE WORLD ...

A large stock of all numbers in Heavy, Extra Heavy and Double Extra Heavy Qualities from 0000 to 16 always on hand.

Also Gritz Gauze from 16 to 72 mesh at lowest possible prices.

CLOTHS MADE TO ORDER TO FIT ANY SIZE REEL OR SIEVE ON SHORT NOTICE.

ALSO PLATED STEEL SCALPING AND BOLTING WIRE FROM 10 TO 100 MESH.

TEMPERED STEEL BRAN DUSTER WIRE FROM 36 TO 70 MESH.

SPECIAL WIRE FOR ALL PURPOSES:

Perforated Zinc, Leather, Rubber, Cotton and Link Chain Belting, Sprocket Wheels, Cockerell Steel Wire Scouring Cases for Wheat Cleaners, Elevator Buckets, Bolts, Caldwell Steel Conveyor, all sizes, Flour Triers, Grain Scoops, Dust Protectors, and a Host of other Articles and Supplies for Millers, all of the Very Best Quality at Reasonable Prices. Orders by mail receive ready attention and prompt despatch.

WRITE FOR CATALOGUE AND CIRCULARS.

WM. & J. G. GREEY,

2 CHURCH STREET . . TORONTO, ONT.

Standard Curved Sieve

AND THE IMPROVED NEW ERA SCALPERS

2 SEIVE SCALPER.

ARE
THE
POPULAR
MACHINES
FOR
HANDLING
BREAK
STOCK
AND
GRADING
MIDDLINGS

3 SEIVE SCALPER AND GRADER.

IMPROVED NEW ERA SCALPER.

One 1 Sieve New Era will scalp the breaks in a small mill . .

One 2 Sieve Standard Machine will scalp the breaks and grade the coarse middlings in a small mill . . . . . .

One 3 Sieve Standard Machine will scalp the breaks and make two grades of middlings . . . . . .

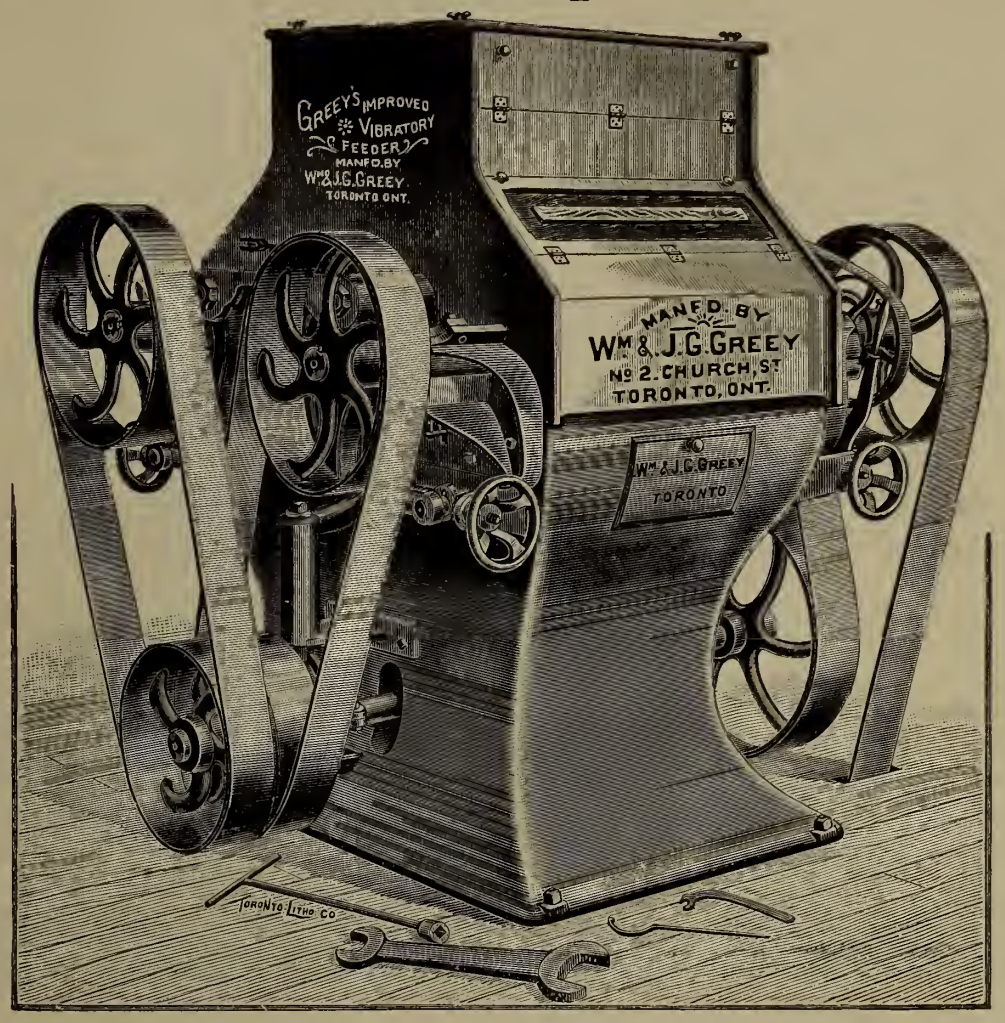
MANUFACTURED BY

WM. AND J. G. GREEY

2 Church St., Toronto, Ont.

The Best is Cheapest in the End

Are always in better working condition
Produce better results
Don't have to be corrugated and ground so often



Mill don't have to shut down for repairs
Makes more money
Considerable saving in expense

GREEY ROLLS

ARE SO HARD AND TOUGH

LAST TWICE AS LONG AS OTHERS

..... Guaranteed to be absolutely free from any flaw .....

GREEY ROLLS ARE THE BEST

Old Rolls ground and corrugated with the utmost precision

Warranted perfectly true, and returned promptly

OUR ROLL GRINDING AND CORRUGATING PLANT is the largest, best equipped and most accurate in the country; our stock of Corrugating Tools the most varied. New Corrugating Tools of any style made to order with the greatest nicety.

MANUFACTURED BY

WM. & J. G. GREEY

2 CHURCH ST.
TORONTO

DICK, RIDOUT & CO.

JUTE AND COTTON

BAGS AND SACKS

OF EVERY QUALITY AND SIZE REQUIRED.

Strict attention given to prompt shipment.

Original Designs for Brands Prepared Free . . . Printing in beautiful Bright Colors at Lowest Prices

SEND FOR SAMPLES AND PRICE LIST

DICK, RIDOUT & CO., TORONTO, ONT.

Actual Results

NET PREMIUMS PAID TO THE

ONTARIO MUTUAL LIFE

on an ordinary Life Policy of $1,000, No. 1230 during its first 20 years, issued for age 37 :

In 1872....	Paid	$26.57	In 1882....	Paid	$13.29
1873....	"	26.57	1883....	"	12.33
1874....	"	26.57	1884....	"	11 69
1875....	"	24.71	1885....	"	11.35
1876....	"	20.65	1886....	"	11.35
1877....	"	19.16	1887....	"	12.19
1878....	"	17.32	1888....	"	12.88
1879....	"	13.02	1889....	"	12.41
1880....	"	12.65	1890....	"	11.91
1881....	"	13.29	1891....	"	11.38

Total Paid in 20 years....$321.29

F. E. DIXON & CO.

MANUFACTURERS OF

Star Rivet LEATHER BELTING

70 KING ST. EAST

Toronto

WRITE FOR DISCOUNTS

1892 MODEL

Remington Typewriter

Unapproached for Excellence of Design and Construction, Quality of Work, Simplicity and Durability.

MACHINES FOR RENTAL
OPERATORS SUPPLIED SEND FOR CIRCULAR

GEORGE BENGOUGH
- 45 -
Adelaide St. East
Tel. 1207. TORONTO

SPACKMAN & CO.
164 St. James Street
Tel. 1189 MONTREAL

BAGS

For FLOUR OATS BRAN FEED

Every Size and Quality in stock
The Largest and Best Equipped Bag Factory in Canada

BAG PRINTING IN COLORS

A SPECIALTY

. . . DESIGNS FURNISHED FREE . . .

and the Best Work guaranteed

PRINTING CAPACITY 15,000 BAGS DAILY

HESSIANS or BURLAPS

We carry the Largest and Best Assorted Stock in the Dominion.

THE CANADA JUTE COMPANY LIMITED

15, 17, 19 AND 21 ST. MARTIN STREET, MONTREAL

Toronto Agent : FRANK T. BARR, 48 Wellington Street East, Toronto

C. C. CLEVELAND G. F. CLEVELAND

J. L. Goodhue & Co.

MANUFACTURERS OF

LEATHER BELTING . . . .

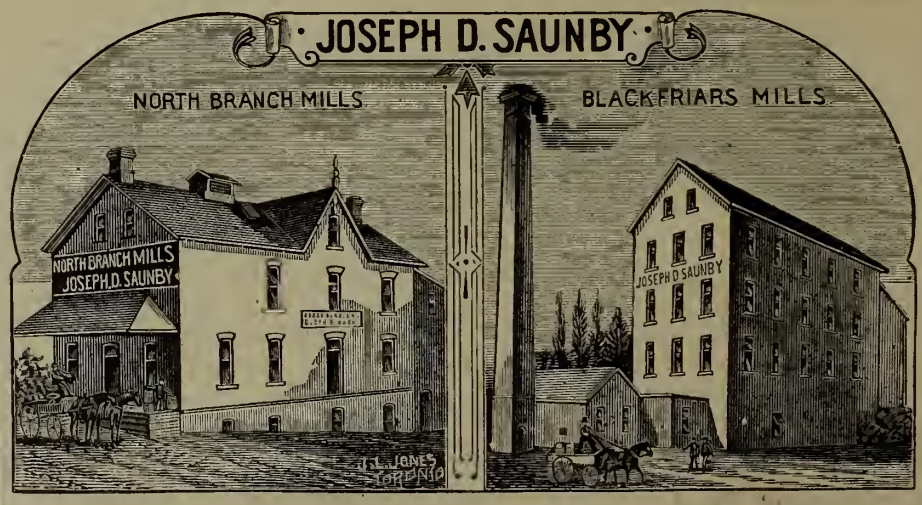
AND

LACE LEATHER

DANVILLE, Que.

NEW & 2ND ILLUSTRATED CATALOGUE FREE MACHINERY H.W. PETRIE TORONTO, CANADA

JOSEPH D. SAUNBY



LONDON, ONT.

Manufacturer of . . . .

. High Grade Flours

Brands :

"ANSONIA"

AND

"TECUMSEH"

Chopped Feed . . .

In whole or car lots mixed

THE CANADIAN MILLER AND GRAIN TRADE REVIEW

W. J. KRAMER TORONTO

NEW SERIES "MECHANICAL AND MILLING NEWS"

OLD SERIES, VOL. XI. / NEW SERIES, VOL. III. } NUMBER 10.

TORONTO, ONT., OCTOBER, 1893

{ TERMS, $1.00 PER YEAR / SINGLE COPIES, 10 CENTS

MAGNOLIA METAL

IN USE BY

EIGHT LEADING GOVERNMENTS

BEST ANTI-FRICTION METAL FOR

Flour-mill, High-speed Engine, Dynamo, Rolling-mill, Steamship, Railroad, Saw-mill, Cotton-mill, Paper-mill, Woolen-mill, Silk-mill, Jute-mill, Rubber-mill, Sugar-mill, and all Machinery Bearings.

MAGNOLIA METAL CO.

London Office: 75 Queen Victoria Street
Chicago Office: 41 Traders' Building
Montreal Office: H. McLAREN & CO., Agents

Owners and Sole Manufacturers

74 Cortlandt St., NEW YORK

Automatic Arc Dynamos and Lamps
Direct Current Incandescent Dynamos
Alternating Current Incandescent Dynamos
Transformers of High Efficiency
Electric Motors All Electric Supplies

OUR record for the past ten years as Electrical Manufacturers guarantees purchasers satisfaction.

Ask our customers about cost of repairs on Ball apparatus, which for

EFFICIENCY, ECONOMY
SIMPLICITY and SAFETY

are unexcelled.

AN ORDER SOLICITED

Send for new pamphlet of Motors and new Book of Testimonials

THE BALL ELECTRIC LIGHT CO., LTD.

70 Pearl Street, TORONTO, ONT.

A. WATTS & CO.

BRANT ROLLER MILLS

BRANTFORD, ONT.

GEO. McCULLOCH & CO.

Rapid City Roller Mills

RAPID CITY, MAN.

Hungarian Patents
Strong Bakers' and Low Grade

SEND FOR SAMPLES AND PRICES

RUBBER BELTING

MONARCH, RED STRIP AND LION BRANDS.

MANUFACTURED BY

THE GUTTA PERCHA & RUBBER MANUFACTURING CO. OF TORONTO.

OFFICE, 61 & 63 FRONT ST. W. TORONTO.

WRITE FOR DISCOUNTS.

FACTORIES AT PARKDALE, ONT.

KENT MILLS
CHATHAM, ONT.

AYLMER MILLS
AYLMER, ONT.

"KENT MILLS" / "THAMES" / "ELGIN"	High Grade Flour
"SWEET HOME"	Second Grade Flour
"BUDGET"	Low Grade Flour
CORNMEAL	Straight Kiln-Dried / Granulated Sunrise, Kiln-Dried
BEANS	Prime Medium / Hand-Picked Medium

Middlings, Bran, Corn, Chopped Feed

SEND FOR SAMPLES AND PRICES

N. H. STEVENS, Chatham, Ont

ESTABLISHED 1856

The J. G. McLaren Belting Co.

MONTREAL

BELTING

MANUFACTURED FROM

IMPORTED OAK-TANNED LEATHER

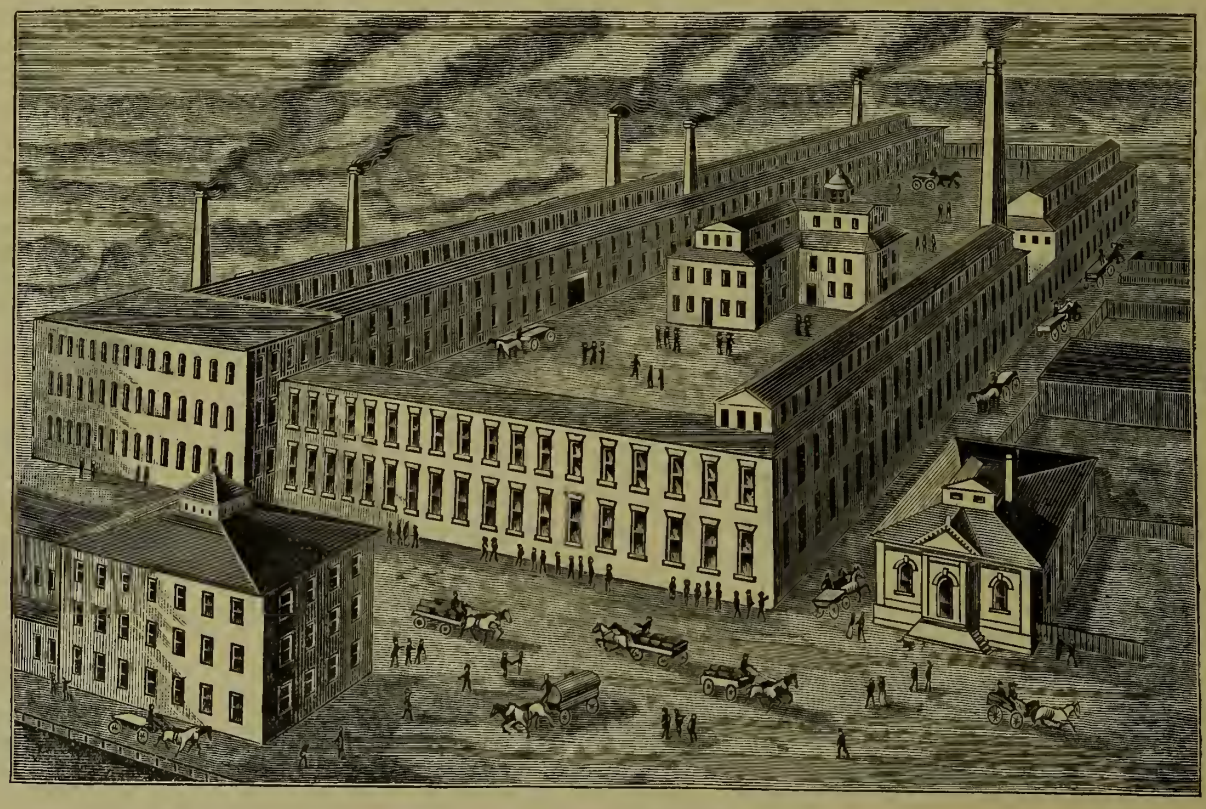
EVERY BELT GUARANTEED

TORONTO: 76 YORK STREET

THE GOLDIE & McCULLOCH CO., LTD.

High Grade Modern Flour Milling

THE science of milling has of late made very rapid progress, and we invite all who aim at having the best machinery in this line to investigate our system For general excellence of design, workmanship and material, and for attaining the very best results, we claim that our manufactures in this line are not anywhere surpassed.



New Mills Erected and Old Mills Remodelled
OF EVERY STYLE AND CAPACITY, UNDER THE SUPERVISION OF A THOROUGHLY PRACTICAL MILLWRIGHT AND MILLER.

Bolting Cloth OF SUPERIOR QUALITY, AND
General Mill Furnishings ALWAYS ON HAND
.... ORDERS PROMPTLY FILLED ....

WE ALSO MANUFACTURE

The Wheelock Improved Automatic Engine, which we claim to be unsurpassed.
Boilers and all appliances in connection therewith. Turbine Wheels.
Wood-working Machinery. Sawmill Machinery. Shingle and Stave Machinery.
Wool Machinery. Patent Wood Rim Split Pulleys.
Fire and Burglar Proof Safes, Vault Doors, etc., etc.

CIRCULARS AND FULL PARTICULARS IN EVERY DEPARTMENT FURNISHED ON APPLICATION

GALT, ONT.

WANTED AND FOR SALE

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MILLER WANTED

WANTED, A GOOD MILLER TO MANAGE a 75 barrel mill. Must be competent man and single. Address

A. LAPOINTE,
St. Justine de Newton, Que.

SITUATION WANTED

BY MILLER, 4½ YEARS' EXPERIENCE. Young, single, industrious and strictly temperate. Uses no tobacco in any way. Best of references. State wages when writing. Good mill. Address:

JNO. FORD, Jr., Markdale, Ont.

FOR SALE.

A LIMITED QUANTITY OF HICKORY half-round hoops, suitable for barrels for the West India trade. Inquire of

JOHN CAMPBELL,
Erie Mills,
St. Thomas, Ont.

FOR SALE

BUCK WHEAT FLOUR MACHINERY, ONLY run two years, reason for selling, want of room. Machinery can be seen running. Will take buck wheat flour in payment.

Apply to

JOHN MACKAY,
Caledonian Mills,
Bowmanville.

FOR SALE

ONE DOUBLE SET, 9x18, ROAT'S SMUTter (Greey's make).
One Double Set, 9x18, Roat's Smutter, corrugated, (Goldie & McCulloch make).
Two Inter-Elevator Flour Bolts, 8 feet by 33 inch cylinder.
Two Round Scalpers, 3 feet hy 20 inch cylinder.
One Purifier, No. 1 (Barter make).
One Eureka Smut Machine, No. 1.
One Oat Separator, No. 1.
One 36 inch Water Wheel (Leffel), and a quantity of Shafts, Pulleys and Gears.

The above machinery is as good as new, and will be sold cheap, for cash. Apply

DOBSON & CAMPBELL,
Beaverton, Ont.

FOR SALE

I OFFER A SEVENTY-FIVE BARREL ROLler mill, very best modern machinery, engine and boiler complete, in best hard wheat region in the United States. Railroad point, near Manitoba boundary, and largely settled with Canadians. Excellent chance. I own by accident, and sell because not a miller. Terms easy.

C. M. HERTIG,
Box 382, Minneapolis, Minn.

TO MILLERS

—

FOR SALE

"NATIONAL ROLLER MILLS," BRUSSELS, Ont.; capacity 100 barrels per day. Cheap, easy terms of payment. Address

"B.C.," P.O. Box 566, Toronto.

ARE YOU INTERESTED IN LUMBER?

SCRIBNER'S LUMBER AND LOG BOOK

Is invaluable to any who have occasion to measure lumber, cast up measurements of timber of any shape, and to farmers and mechanics, without any exception.

THE TABLE ON STAVE AND HEADING BOLTS

and the table for casting up price per cord for these is a great saver of time, and always accurate.

Over a million copies have been sold. Post paid to any address on receipt of 35 cents.

Address,

A. G. Mortimer,
Toronto, Can.

EMBRO OATMEAL MILLS

ROLLED OATS

STANDARD AND

GRANULATED OATMEAL

Made from Selected White Oats

SPECIAL TERMS MADE WITH FLOUR MILLERS FOR RE-SHIPMENT WITH CARLOAD FLOUR

D. R. ROSS, Embro, Ont.

Chatham Wired Hoop Co., Ltd.

Owner of the Patents for the Dominion of Canada

IS now issuing Licenses for the use of wooden barrel hoops with reinforcing metal band commonly called "the wired hoop." These hoops are specially serviceable for high grade cooperage, requiring strength and tightness, such as flour, meal, cement, etc.

— ADDRESS COMMUNICATIONS TO —

CHATHAM WIRED HOOP COMPANY, LIMITED, - - - CHATHAM, ONT.

FLOUR, GRAIN AND COMMISSION MERCHANTS AND BROKERS

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GRAIN and COMMISSION Merchant

ONTARIO AND MANITOBA WHEATS IN CAR LOTS

Consignments promptly attended to

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TORONTO

ESTABLISHED 1859

WM. GALBRAITH

Commission Merchant

Flour and Grain

48 Front Street E.

TORONTO

THOMAS McLAUGHLIN

FLOUR

—AND—

GRAIN

DEALER

210 BOARD OF TRADE BUILDING

TORONTO

EASTERN AGENCY:

50 St. Paul Street

QUEBEC

Peer & Company

Flour and Grain Merchants

BOARD OF TRADE BUILDING

TORONTO

LAWRENCE COFFEE THOMAS FLYNN

ESTABLISHED 1845

L. Coffee & Co.

Grain and Commission Merchants

38 Church Street

TORONTO

J. F. McLaughlin

FLOUR, GRAIN MILLFEED

WHOLESALE

Send large samples and quote prices . . . .

MANITOBA WHEAT FOR SALE

Rooms 511 and 512
Board of Trade
. . Toronto

STARK BROS. & CO.

BOARD OF TRADE BUILDING

. . TORONTO . .

GRAIN DEALERS

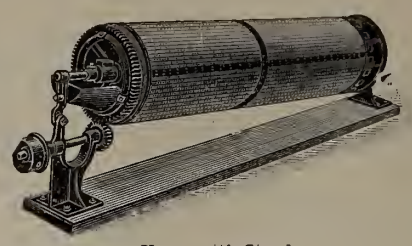
Specialties:

MANITOBA WHEAT

MILLFEED

AND COARSE GRAINS

WORLD BEATERS



No. 1 with Stand

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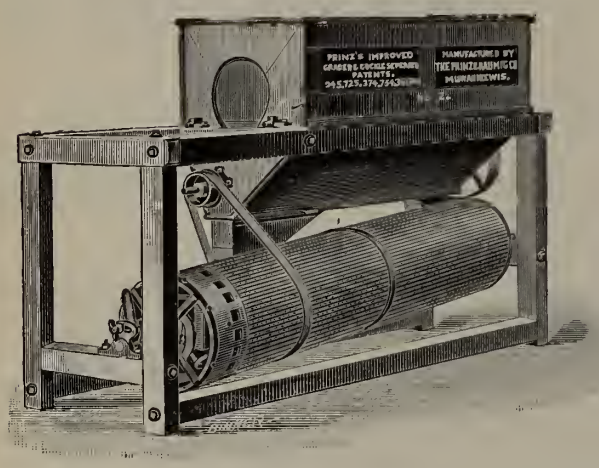
GENUINE PRINZ COCKLE MACHINES



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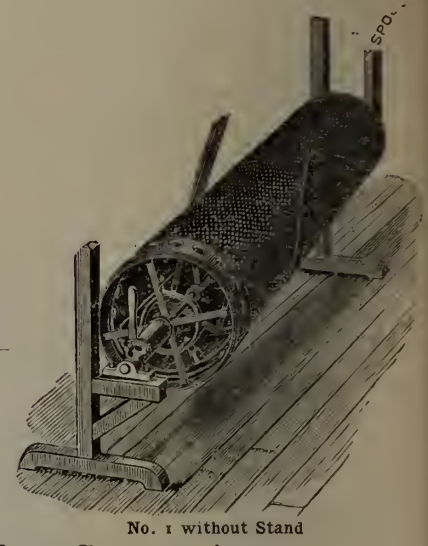

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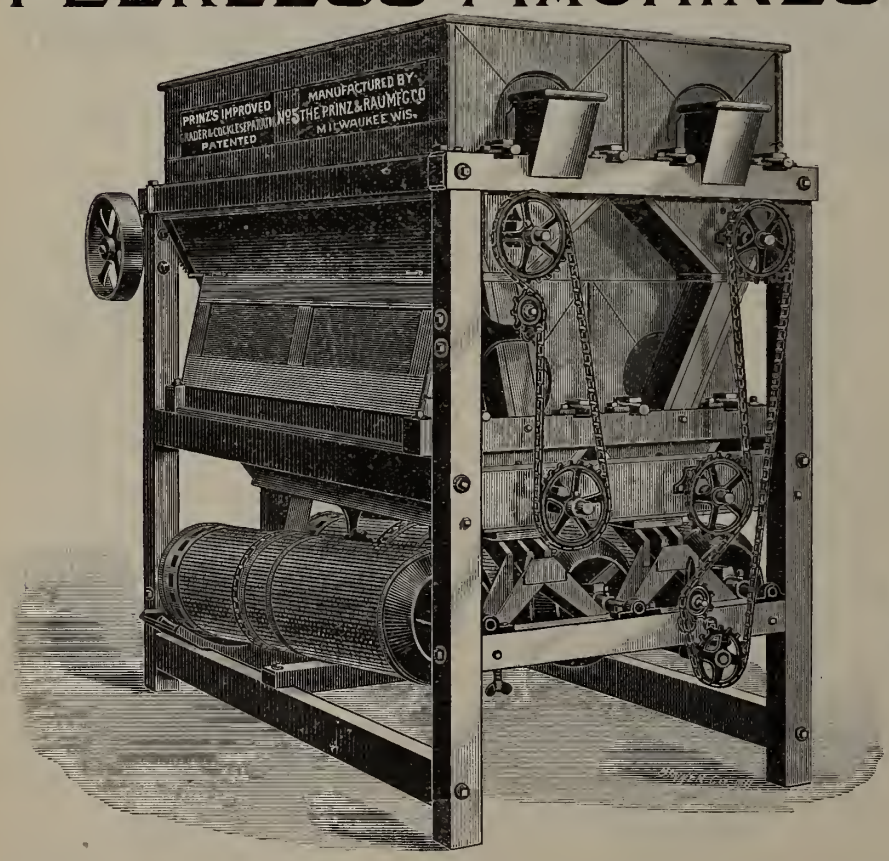
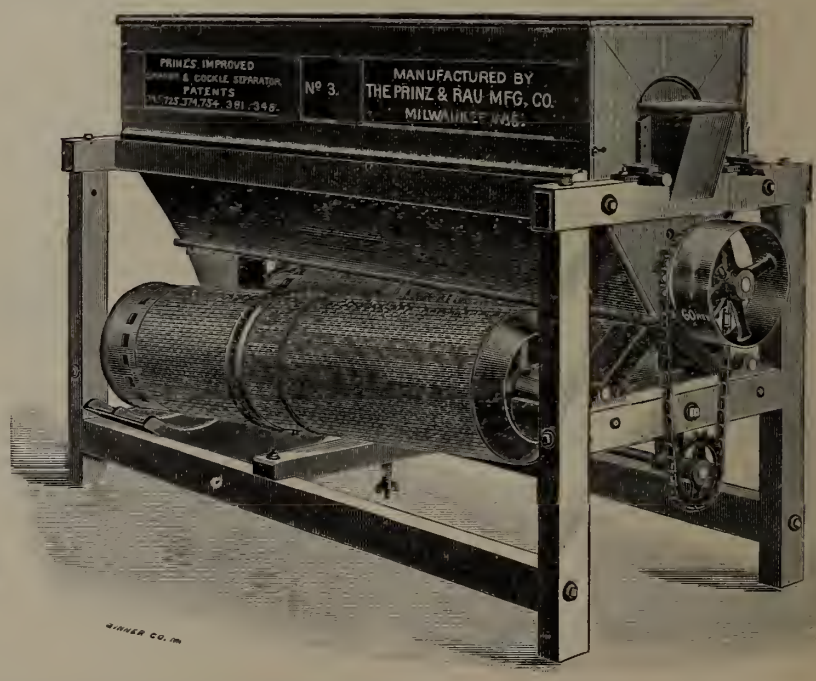


Two-thirds of the mills in Minneapolis, and all the mills in Milwaukee, and about a thousand all over the country, are using the "PRINZ"



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WM. & J. G. GREEY 2 CHURCH ST. TORONTO

THE CANADIAN MILLER

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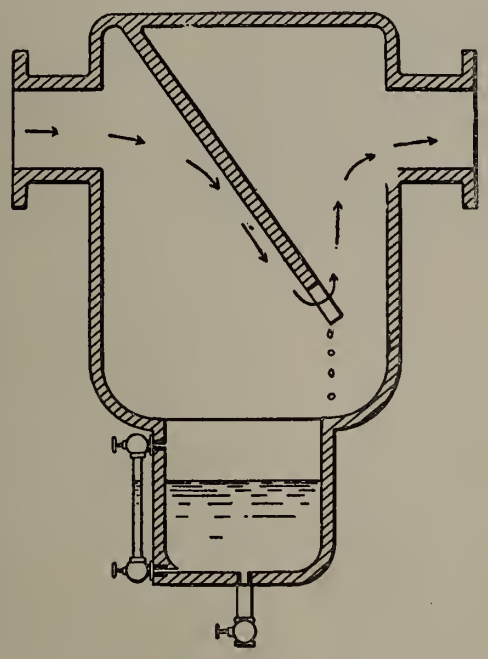
ON SEPARATORS.

THIS is a day for watching the small economies of business. The time was, as the Locomotive says, when manufacturers paid comparatively little attention to the smaller losses that occurred in their mills and factories. Competition was not severe, and it was not considered necessary to keep a watchful eye on the innumerable small leaks through which profits escaped. Competition in all lines of manufacturing has increased tremendously, and the narrow margins on which business must be done make the most trifling losses worthy of serious consideration. This studied economy shows itself in the use of steam; and we find mills fitted out with triple-expansion engines and running at pressures that call for the utmost skill in designing boilers that shall carry these pressures safely. The drips from the pipes are carefully collected and returned to the boiler-house, and heat that otherwise would be wasted is utilized for heating feed-water. As the utilization of waste is increasingly realized, new problems are continually arising and forcing themselves on our attention. Thus, in saving the heat from exhaust steam, it was soon found that, when open heaters are used, the oil particles that are carried along from the engine pass into the feed-water and give trouble in the boilers. The action of oily or greasy matter in boilers will be understood from the following extract from the Locomotive for March, 1885: "The action of grease in a boiler is peculiar. It does not dissolve in the water, nor does it entirely decompose. Neither does it remain on top of the water; but it seems to form itself into what may be described as 'slugs,' which at first seem to be slightly lighter than the water, of just such a density that the circulation of the water carries them about at will. After a short season of boiling, these 'slugs' or suspended drops seem to acquire a certain degree of stickiness, so that when they come in contact with the shell and flues of the boiler, they begin to adhere thereto. Then under the action of heat they begin the process of 'varnishing' the interior of the boiler. The thinnest possible coating of this varnish is sufficient to bring about overheating of the plates. We emphasize the point that it is not necessary to have a coating of grease of any appreciable thickness to cause overheating and bagging of plates and leakage at seams. The time when damage is most likely to occur is after the fires are banked; for then, the formation of steam being checked, the circulation of water stops, and the grease has a chance to settle on the bottom of the boiler and prevent the contact of water with the fire-sheets. Under these circumstances a very low degree of heat in the furnace is sufficient to overheat the plates to such an extent that bulging is very likely to occur." Of course there is greater likelihood of trouble with some kinds of oil than with others, animal oils being most troublesome, and mineral oils least so. Various means have been devised for preventing the harmful effect of oil in boilers, and one of the most common of these is the separator. The object of this appliance is to free the steam of such particles of water, oil or dirt as it may hold in suspension. When the object is to remove entrained water, the separator is placed in the steam-main, near the engine; and when it is used to remove oil, it is placed in the exhaust-pipe between the engine and the heater. There is a great number of makes of separators on the market, but all of them depend for their action on the great mobility of steam and the inertia of solid or liquid particles. For convenience we may divide them into two classes, which we may call momentum separators and centrifugal separators, respectively. Our illustrations of these two types are to be considered merely as diagrams illustrating the principles of the separator, and in no sense as pictures of appliances that are in actual use. Fig. 1 shows the principle on which the momentum separator is based. Steam enters it at one nozzle and leaves it by the other, its general course being indicated by the arrows. Directly across the course of the steam there is a plate of iron called the baffle-plate. This baffle-plate causes the steam to deflect downward, but the oil particles, on account of their momentum, impinge against the plate and collect in drops until they run down and fall into the receiver below. Usually the baffle-plate is not cut square across at the bottom, but runs obliquely across the casting, as shown in Fig. 2, so as to lead the oil-drops to one side and prevent them from falling directly through the main current of steam. The reservoir or catch-basin is provided with a gage-glass to indicate the height of the oil and water in it, and also with a cock for drawing them off. Some provision should also be made for removing the particles of mud and grit that are liable to collect. Fig. 3 shows a centrifugal separator in which the steam is made to circulate spirally around a central core, the centrifugal action so developed throwing the particles of oil and water to the sides of the casing, where they collect and flow down into the catch-basin below, a glass-gage and a cock being provided, as before. The principles illustrated in these diagrams are applied in practice in a great variety of ways.



FIGS. 1 AND 2.—DIAGRAMMATIC VIEWS OF THE MOMENTUM SEPARATOR.

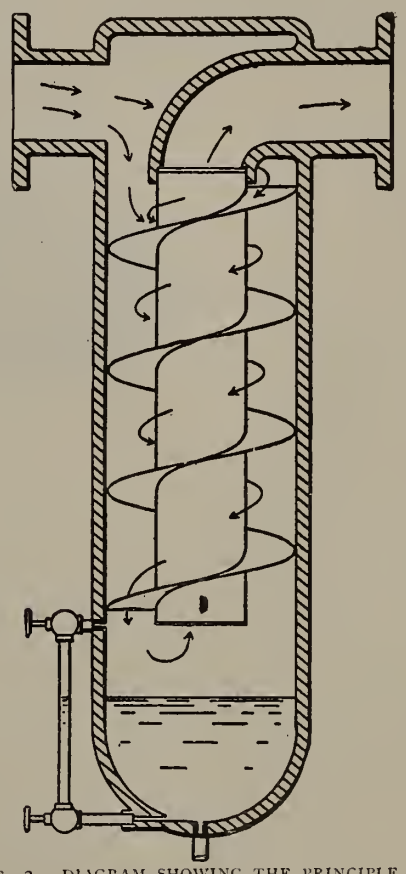


FIG. 3.—DIAGRAM SHOWING THE PRINCIPLE OF CENTRIFUGAL SEPARATORS.

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AN INDIA RUBBER SOLVENT.

THE demand for both gutta-percha and india rubber is extensive and increasing yearly, owing in a large measure to developments in telegraphy and electrical engineering, besides many uses which are being found for them in minor industries. The present supply of gutta-percha is not sufficient to meet the demand, and it is believed that unless steps are soon taken to preserve the sources of supply there will be an actual dearth of this commodity. This has had the effect of raising its value in the market, and while in 1860 the price of the best quality of refined gutta-percha was $1,200, by 1890 it had advanced to $3,900 per ton. An attempt has been made to economize this useful material by combining it with rubber, which is a much cheaper article, varying as it does in price from $750 to $1,600 per ton. In a new invention, the two materials are blended by a cheap process, both being partially dissolved, and afterwards intimately mixed. The main feature of the invention is the employment of a substance hitherto little known or understood, but which exhibits singular properties. This substance acts as a solvent both on gutta-percha and rubber, and combines with them in such a way as to form a united and homogeneous mass, which posseses the qualities of the best gutta-percha, while being superior to it in nonoxodizing properties, elasticity, tensile strength and insulating power, besides being produced at much smaller cost.

BOILER CONNECTIONS.

IT is a pretty good plan to make all your connections for boiler appliances with pretty good sized piping, so as to avoid the chance of having them stopped up with a little scale as is too often the case. For connecting up watercolumn, or other combinations of a similar character, use at least inch pipe, and though it may look out of proportion, it is better than having them stopped up and leave you without any means of knowing where your water is in the boiler. Steam gauge connections do not come under this head as they should come out of the steam space of the boiler and there is not the liability of being clogged that there is in water connections, still a little larger than is generally used will do no harm and might be an advantage in some instances.

In piping up boiler fixtures, or any other kind for that matter, it is a pretty good plan to make a free use of "crosses" instead of using "ells," and then plugging up the two free ends.

This gives you a chance to "probe" both ways by taking out the caps and is often very handy, indeed in keeping things cleaned up thoroughly and is a good plan to be used in all kinds of piping that is liable to be stopped up from dirt or scale.

VIEWS AND INTERVIEWS.

A Pinch of Dust.

The dangers that lurk in the air form the subject of an essay by M. de Nansouty on "The Atmosphere of Large Towns and Micrography." He points out the increased pollution of the air in Paris from the factories worked by steam machinery. An analysis of dust and rain particles reveals that a remarkable collection of divers objects may be absorbed at every breath in the street of a large city; silex, chalk, plaster, pulverized rock, charcoal, hairs, fibres, vegetable refuse, starch, pollen cells, etc. A specimen of dust collected from furniture on the third floor of a street in Rennes contained all this and nearly three million bacteria in addition. A gramme of dust (about fifteen grains) in movement in the streets encloses about 15,000,000 bacteria.

Some Superstitions.

Mr. J. H. Macadam, an English writer, tells of various superstitions connected with the baking of bread. In the North of England there used to be prepared what was called the "Groaning Cake," a slice of which was given to all those who came to see the new-born child. There used to be a custom in the Highlands of Scotland of taking a new-born child and tying it up in a sheet along with bread and cheese, hanging them all on to the swinging hook that hung over the open fire, and turning it three times to keep the evil spirits away from the child. In Asia Minor, if a careful mother has to leave her child before he is forty days old, she places beside him a bit of bread, a pair of scissors, and a little image of Christ. A custom like that once prevailed in England, for Herrick says:

Bring the holy crust of bread,
Lay it underneath the head,
For a certain charm to keep
Hags away while children sleep!

Good and Bad Milling.

Milling is rendered successful or unsuccessful in various ways, says John Metherel, in Milling. Bad mill locations and bad management lead to disaster; unskillful milling and bad management follow in the same direction; good milling, but a defective system, the milling being good only as far as system is concerned, is a fruitful source of non-success, particularly when some competitor is present. Unwise investment, coupled with waning interest, is an insidious and hidden foe to success, even when supported by good management and milling. On the other hand, a multiplicity of combinations can be enumerated to render plants successful and everything being as it should be. With reference to investment, location, management and the miller, the question of system is the one paramount of all others, and in my mind answers most of the questions involved in satisfactory and unsatisfactory milling, viewed in relation to dollars and cents, and forcibly answers it in the ratio of percentages and maintenance of qualities, with relative yields.

Wheat Surprises.

The Milling World, whose editor seldom wears gloves, sails in after this fashion in discussing the many chameleon-like changes that have marked the course of the wheat market this year: "What a year for surprises in cereals! The trade got ready for a big drop in wheat prices as soon as the new spring-wheat crop began to move. Within a week after that movement began, wheat advanced 10 cents a bushel in the Northwest. Then the trade got ready for a big rise in wheat prices on the United States government's very bull report for September. When that report came out, wheat dropped a cent in one day. Then the New York Sun armed its powerful intellectuals with a bull's hide, hoof, tail, horns and all, and attempted to "kite" wheat. On that eventful day wheat dropped nearly a cent a bushel. Then the "official report" of some Jewish money-lenders and grain-dealers in Europe came out, and it showed that Europe has practically all the wheat it needs for consumption. On top of that "bear" report wheat advanced one or two cents. England has grown her smallest and nastiest wheat crop on record, and yet English millers to-day are getting wheat for grinding at the lowest rates ever known. In every case the world over wheat yields are giving the lie to all estimates. The whole wheat trade seems to be out of joint, all the reporters are discredited, all the "private" estimates are ridiculous, and all the government "official" estimates are simply grotesque. Will the unique cereal story of 1893 ever be repeated?"

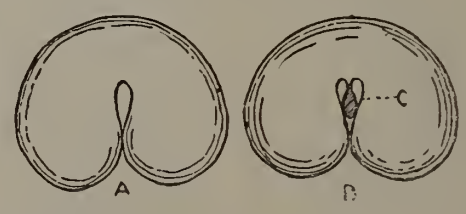
Watermill vs. Windmill.

The watermill is older than the windmill, but prehistoric corn, such wheat, for instance, as Pytheas, the first traveller from civilization to Great Britain, saw the natives of Kent drying in large sheds on account of the absence of the sun, was ground in hand mills, as is still done in the East. Querns, as the mills are called, are frequently found in the cyclopean and underground dwellings of Scotland. Their simplest form consists of two thin circular stones, the upper of which is pierced in the centre and revolves on a wooden or metal pin inserted in the lower one. The grinder dropped the grain into the central hole with one hand, while the other caused the upper stone to revolve by means of a stick inserted in a small hole near the edge. The laboriousness of this operation is illustrated by a story told of Columbia. He was studying under St. Finnian, and every night on which it fell his lot to grind the corn with the quern, he performed his task so quickly that his companions enviously asserted he had the assistance of an angel in turning the stone. Wilson thinks that at that time, the early part of the sixth century, the quern was the only mill in use. Large watermills were introduced in the thirteenth century into Scotland, and legal means had to be employed to render their use compulsory. The quern is said to have lingered in the remoter districts of that country until the close of the last century, notwithstanding Alexander III's prohibition in 1284, that: "Na man sall presume to grind quheit, maishlock or rye with hands mylne, except he be compelled be storm or be lack of mills, quick sould grind the samen."

THE EVOLUTION OF CEREALS.

EXPERIMENTS in the evolution of wheat are the order of the day. Says Liverpool, Eng., Milling: Probably what will eventually prove to have been, at least to the coming generation, the most valuable and important series of agricultural experiments ever originated and carried to a successful issue will have been those relating to the evolution of cereals. From the results of experiments which are being carried on by Messrs. R. & J. Garton at their private grounds, Newton-le-Willows, Lancashire, in the evolution of new and distinct types of wheat, oats, barley and rye, the production of the world's food supplies will at no distant date be very considerably enlarged, and this without any increase in the cost of production. The results so far obtained, after a period of 13 years of work, point in a conclusive manner to an all-round increase of from 25 to 50 per cent., and so striking are the results, each season's growths showing some new and remarkable developments, that it is impossible to say to what extent this increase may eventually arrive.

Irrespective of any increase of population over food supplies, the evolution of the cereals is rendered all the more necessary when a knowledge of their productive organs is understood. What Messrs. Garton maintain



and demonstrate is that the cereals are a class of plants which are strictly self-fertilizing, whose reproductive organs are so placed in combination with other parts of the floret that artificial fertilization by insect or atmospheric aid is rendered practically impossible. We have thus a class of plants which have been habitually in-and-in breeding for an indefinite period, which must and does produce a weakened constitution, rendering the plants more liable to disease and materially to decrease their fertility, just as the progeny of in-and-in bred stock would constitutionally suffer by too close inter-breeding.

To originate new and distinct types possessing greater productiveness and vigor than the original varieties, it is absolutely necessary that each parent plant should possess some distinctive and valuable feature peculiar to itself. In one case there may be a variety producing a large grain, but in very limited quantities in another variety. This order of things may be reversed and produce a very large quantity of infinitesimally small grains. Then there may be a further variety possessing both these qualifications and still be unsuitable for cultivation, owing to the straw being weak and unable to carry the ear. To go still further, there may be a variety producing thin skin or husk, and another devoid of skin whatever, one variety ripening early and another late, one withstanding the most severe weather and another susceptible to the least variation. In some instances uncultivated varieties have been met with indigenous and to all appearances utterly worthless, but still possessing to the initiated eye some important and undeveloped features which have eventually played a most important part in the evolution of improved types in these experiments.

More than one popular notion has been exploded by Messrs. Garton. Farmers have been accustomed to complain of high winds and heavy rains at blooming-time as washing off the delicate flowers and preventing the fertilization of the grain. Messrs. Garton say that, immediately the flowers become visible, the critical moment has passed and the work of impregnation, if it be achieved at all, has been accomplished.

Another popular idea, and one of special interest to the miller, which looks like being entirely overturned, is that of the so-called crease-dirt. It is generally supposed to be foreign matter which finds its way to the bottom of the crease during harvesting operations, threshing and subsequent handling of the grain. Messrs. Garton showed us undeniable proof, in a series of highly magnified photographs which they had taken from sections of the wheat-berry, that this is not the case, but that it is a natural production of the interior of the berry beneath the skin at the bottom of the crease. To such high powers have they carried their magnifying processes that they are able to supersede the accepted theories and the text-books. By magnifying a thin slice taken out of a grain of wheat some 400 diameters, it will be seen that there is no connection between the middle of the grain and the outside. Our readers will understand from the accompanying diagrams that the theory is quite new. A is a diagram such as is usually found in text-books. B is drawn from a micro-photograph executed by Messrs. Garton. There is no mistake about the matter, because our experimentalists have magnified the well or duct marked C so that it is shown on paper some five or six inches long, with the natural production distinctly visible in a granular formation at the bottom of the duct. This granular formation is more dense at the end nearest to the germ, and in some varieties of wheats the production is much greater than in others. Therefore, what we desire to explain is that the matter called crease-dirt is not external, but a natural internal production.

THE BLACK WEEVIL.

A LETTER from Jackson Park, Chicago, is published in the Northwestern Miller, stating that a serious grain pest, known as the black weevil, has been found in the cereal exhibits of the agricultural building at the world's fair. It is a native of the West Indies and abounds in tropical climates. The insect is, as yet, comparatively unknown in the northern states, but so alarmed are the exposition authorities over its appearance among their exhibits that all the cereals now on display at Jackson park will probably be burned at the end of the fair. Not only does the invasion of the black weevil into a northern clime affect the farmer, but it also vitally concerns the miller, for cases are on record where human beings have suffered fatally from the use of flour made of wheat badly infested with species very closely allied to the black weevil.

THE CANADIAN MILLER, $1.00 a year. Subscribe.

AN IMPORTANT AWARD.

THE accompanying cut is a good illustration of the "Andrews" Lumber Dryer, which was last month awarded the Gold Medal at the World's Columbian Exposition in Chicago.

The gentlemen appointed to investigate the different systems now before the public for the drying of lumber and other wood goods, reported as follows:

"The Andrews Lumber Dryer is adjudged worthy of award for the following points of excellence:

(1) For its fire-proof qualities, the sides being brass, primarily serving as condensing surfaces, and the roof being covered with gravel.

(2) For a progressive system of heating, secured by a graduated arrangement of pipes beneath the lumber.

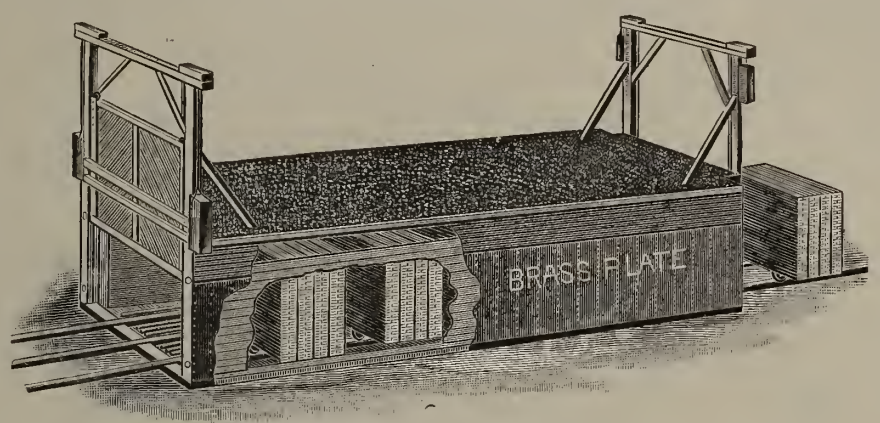
(3) For even circulation of heat upward through the lumber and downward through the hollow walls, thus coming in contact with the brass exterior covering, acting as condensing sheets, the heat thus being nearly even at the top and bottom of kiln with a positive circulation without the aid of blowers or chimneys.

(4) For controlling the condensation so that the moisture appears on the surface until it is entirely expelled from the lumber, the drying being from centre outward.

(5) Economy of heat by means of using the same air continuously with little loss."

The following gentlemen composed the Departmental Committee on awards:

S. Suwa, Secretary Imperial Japanese Commission.
Baron de Marajo, commissioner from Brazil.
G. Neiderlien, scientist and commissioner from Argentine Republic.
Dr. E. Hessler, botanist and commissioner from Paraguay.
Prof. A. Runnebaum, University of Eberswalde, Germany.
Prof. G. Sellergren, University of Stockholm, Sweden.
Prof. A. Grebnitzky, University of St. Petersburg, Russia.
Robert Hudson, commissioner from New South Wales, Australia.
Hon. B. L. Butcher, West Virginia, U.S.
G. A. Priest, Census Bureau, Washington, D.C.
Hon. R. C. Joiner, Wisconsin.
M. Fenlon, Kansas.
Dr. B. E. Fernow, Chief Forestry Department, Washington.
O. S. Whitmore, Forest Botanist, Chicago.
Phro Suriya, Siam.



"ANDREWS" LUMBER DRYER.

This kiln, of which there are now nearly five hundred in use in the United States and Canada, is controlled in this country by the Dominion Dry Kiln Co., of Toronto, who will cheerfully furnish full particulars as to its workings to anyone making application for same.

A GRAIN OF WHEAT.

A WRITER, signing himself "Jackstick," discusses interestingly in the Miller, of London, Eng., the importance of a grain of wheat. What is a grain of wheat? he asks. And this he answers by saying: The fruit of the wheat plant, the possession of which, in quantity, by any nation, will always, as it has in the past, denote wealth, and a high state of civilization. This fruit is most wonderfully made, and the life it contains is most beautifully protected; its study during development will make it impossible for any miller, with any pretence of watching the laws of nature and reasoning things out in his own mind, to produce flour from it of a bad quality, if the lessons its growth teaches are kept in mind. The grain of wheat is protected by three wrappers or skins of different structural formation, in order to prevent, when the grain is sown in the ground, the inner portion absorbing the moisture in the ground. If it were possible for the moisture to penetrate through the bran of the grain of wheat sown, it would rot in the ground before sufficient heat had been generated in the soil to start the germ into active life. From the nature of the formations of the skins one can at once see, by means of the microscope, that they are constructed to resist the entrance of water, and a very simple experiment will prove to any miller that this conclusion, arrived at by observation, is correct, and that in the process of washing wheat, as carried on now, no water penetrates through the bran, and at a future time, when dealing with wheat washing, we will point out the great advantages to be obtained from this fact.

The experiment that will prove that the water does not penetrate through the bran is accomplished as follows: In a saucer place some water in which has been mixed some dye, such as is used for coloring microscopical objects, and then place in contact with the water a number of berries of wheat, but so tightly arranged, through holes pierced in a sheet of cork, that only different portions of each berry touch the water. By these simple means the wheat berries float on the surface of the dyed liquid, and if the saucer is placed in a fairly warm place, in the course of 48 hours the germ will start into active life and draw the water to it by means of the ducts that nature has provided for it, namely, the beard at the opposite end to the germ and the placenta cord or channel between the beard end and the germ. The dye in the liquid will show the passage taken by the water, and it will be found that it only passes into the berry through the yellow hairs, and not at all through the skin. It will be observed from what is stated above that the temperature has a great influence on the water-absorbing capacity of the wheat berry, and it is a well-known fact that the amount of water absorbed at a given time in the process of wheat-washing is greater at a higher that a lower temperature. The outer skin, by reason of its contact with water, becomes somewhat thicker, but does not allow the water to pass through it.

We must not forget, for instance, the fact that when a grain of wheat starts growing there takes place what was discovered by Naegeli when he took 40 grms. of perfectly dry wheat starch and mixed it with an equal quantity of water, that the temperature rose from 22 degs. C to 32.5 degs. C. This fact is a very important one for millers who have met with great difficulties in their improved methods of wheat washing, and this fact can be turned into profitable use by those who follow the further development of the wheat berry. Before leaving the wheat berry to discuss the interior portion of the grain, which is the part that the miller has to reduce to flour, it might be as well to call the attention to the middle, or what has been truly called the compound skin, which under the microscope looks like layers of fishes' scales placed so as to resist to the greatest degree the entrance of water. These scales are so light and friable that it is of the uttermost importance in reducing the grain of wheat to flour to disturb these scales as little as possible, or they will get mixed with the flour, and on account of their nature render it most difficult to remove them, never mind how many times the middlings may be purified. With this fact before us we can very easily understand why it is such a great advantage to make broad bran, and the reason why the flour from a mill that is producing broad bran is, as a rule, so much better than the flour from a mill which has smaller bran. This, no doubt, is the reason why the old-fashioned millstone miller, when visiting another brother miller's mill, always goes to the bran pile before giving his opinion as to how the mill is working. It may be taken, therefore, that broad bran means, whether in millstone or roller milling, a better color flour than what is possible in a mill that is producing a small bran. For several years a considerable amount of time and money has been expended on experiments for arriving at the decortication of the wheat berry, and it has been thought that if the outer skin was removed it was something gained. Moreover, there are men in different parts of the world to-day who are well acquainted with the different machines in use in roller milling devoting considerable time in order to arrive at this object, who, if they had considered for a moment the nature of the compound skin, would have at once given up the attempt. But they have always thought that the dirt in the crease is not sufficient to discolor the flour to the same extent as the interior of the berry coming in contact with the bran, so it has been their object to remove the outer skin before breaking up the berry. In removing the outer skin there have always been sufficient scales of the compound skin left exposed, even at the edge of the crease, to discolor the flour produced, and this, with the dirt that remains in the placenta cord, discolors the flour to such an extent that the flour produced has always been worse than that produced in the ordinary way.

PURIFYING MIDDLINGS.

By R. J. Abernathey.

IN the early stage of the purifying age, many and various attempts were made to purify middlings with air alone, and without the assistance of cloth for separating the impurities. All efforts, however, proved abortive when applied to medium and fine stock, and the whole scheme was for many years abandoned by all of the best milling engineers, except so far as it was applied to the coarsest germ stock in gradual reduction milling. For handling that grade of stock aspirators were frequently used. In short, in milling methods, sieve machines only were recommended by those most familiar with actual requirements and best qualified to instruct.

More recently a change came over the scene, the old idea was revived, and the air-current purifying idea becomes a factor once more. It is perhaps true that knowledge and experience have produced rather better machines than those formerly used, but, notwithstanding the living principles that stood in opposition to the success of former air-current purifying machines, stand there still, and while there may be improvement, there can be no absolute success so long as the attempt to violate natural law is continued. There are impurities in middlings, and the specific gravity of these impurities is as great, and, in some instances, greater, perhaps, than the middlings, and therefore cannot be separated from the middlings by air current except at great expense in waste of stock, and even then very imperfectly. The former chief obstacle in the way of purifying fine stock was the waste of flour, which was drawn out and blown into the dust room. Being unable to overcome that obstacle, the matter was virtually abandoned without having to contend with the objection here offered, because the other was the over-awing one. Machines are now constructed so as to save the bulk of the former waste and put it into low grade flour, but the other difficulty now confronts them and becomes the over-awing one. It is one that never has and never will be overcome, because, as stated, in violation of natural law.

It is true that millers are not obliged to use air-current purifiers for all work, because sieve machines are abundant and many of them good, and through this medium fine middlings can be well purified. When more convenient and less expensive to use air machines on coarse stock, it is well to do so, but it is rather foolish to undertake to do all the work with air machines, as it cannot be well done.

FACT.

It is said that "one of the saddest pictures in life is a nigger looking at and 'hankering' after a 20 cent watermelon with only 10 cents in his pocket." But it is not so seriously sad as a miller looking at his competitor's mill running day and night making a barrel of flour out of 4:20, while he requires 4:30 to make an inferior article. One is no more in it than the other.—Ex.

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J. S. ROBERTSON, - - - EDITOR.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

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WHEAT GRADES OF MANITOBA.

SOME dissatisfaction is expressed in Manitoba and the Northwest over the present classification of wheat grades The official regulations providing for the different grades of wheat classify western wheat as follows: "No. 1 Manitoba hard; No. 2 Manitoba hard; No. 1 Manitoba northern," and so on. A protest comes from the territories that it is unfair to them to classify wheat grown in the territories, under the head of Manitoba wheat. The argument, as expressed by the Commercial, of Winnipeg, is like this: "They(the people of the territories) claim that it is not fair their wheat should loose its individuality and be classified with the Manitoba product. The quality of the wheat grown in the territories, they say, is just as good as that grown in Manitoba, which in a general sense is quite true, the quality being similar in each case. The objection is based on the idea that Manitoba gets the credit abroad of producing all the wheat grown in western Canada, which is exported under the name Manitoba No. 1 hard, etc., and there is no doubt but that the foreign buyer, who purchases wheat grown in the western territories of Canada, bearing the grade of No. 1 hard, etc., would in his mind associate the province of Manitoba with the production of the wheat. The objection is a sentimental one, but at the same time it is a reasonable one."

The difficulty in producing a remedy for these conditions is to be found in lack of storage capacity in Manitoba. Difficulties now exist through the multiplicity of grades. Our Winnipeg cotemporary explains the matter thus: "Suppose now that the wheat grown in the territories was classified under different grades from Manitoba wheat, the difficulty of storage would be vastly increased at terminal points. When the grain reached a Lake Superior port, for instance, it would have to be kept separate from Manitoba wheat of corresponding quality, thus making twice as many separate bins in the elevators necessary, and entailing no end of extra routine work. There are now sixteen or seventeen different grades of wheat to be kept separate, which is a trying task as it is. If separate classification were given for the territories, the number of grades to keep separate would be doubled." An argument of some force urged against any change is also found in the fact that the grades as now registered are known to buyers, and especially to those abroad. A change of names would make it necessary to re-educate buyers in this respect.

The trouble is one, it seems to us, that only time will right. The wheat-growing interests of the country have progressed rapidly, and, as is the case with a rapidly growing business, there is need for a constant shifting of methods and plans to meet various evolutions and changes. The time will come when a revision of many matters connected with the grain trade of these western provinces will be necessary, but that time, it can hardly be said, has arrived just yet.

GROWING WHEAT.

WILL it any longer pay to grow wheat? With prices down to 58 and 60 cents farmers are asking one another this question. Let us see. Man must eat bread, so flour is a necessity and wheat is a primary necessity in the production of flour.

There is a vast difference between the prices obtained for wheat in 1893 and those that ruled twenty and even ten years ago. But the conditions of farming are altered, as well. The labor of working a 200-acre farm is not what it was then. Look at the item of labor. A few men do the work to-day, where, in olden times, it meant to house, feed and pay a large gang of farm hands as each season came around. Farm machinery has, of course, been the important factor in this change.

Ruin is not so near the farmer as he may sometimes think. He has one important advantage over every other branch of trade. Growing wheat cannot possibly go out of fashion. In other trades the scene is constantly shifting, and very radical, decisive, and short are some of the turns.

Wheat can be grown for less to-day than a quarter of a century ago, because our knowledge of improving the soil is so much greater, that we are enabled to get more out of an acre of land in these days. Farming has become a science and something new and pre-eminently useful is being learned of fertilizing methods every year.

He, who does not study these methods will certainly find he is farming without profit; so will one in any branch of trade find he cannot keep up in the procession if he is satisfied to adopt the role of a Rip Van Winkle. Where would our millers be-to-day if they continued to be satisfied with the work of the upper and nether millstone, or allowed their mills to be driven by the older methods of power?

A writer in a Chicago journal is authority for the statement that in parts of the west farmers are making money if they receive 45 cents a bushel for their wheat, and they claim it only costs them from 18 to 22 cents a bushel to raise it.

EDITORIAL NOTES.

JOHN BULL is slower to move than some other people. He likes the old ways; he is naturally averse to disturbing present methods of transacting business. Not unfrequently this is a source of strength to him, but at other times he is simply placing an unnecessary burden on himself as a result of his conservatism. The English miller has stuck with this characteristic tenacity to the flour sack of 280 pounds. It has been no advantage to him, whilst it has meant that the work of handling every sack of flour became often a grievous burden to the man who had to bear the weight of the load. At last a kick has come, and the London Flour Millers' Association, under pressure of the master bakers, has taken steps to fall into line with the 140-pound sack as the standard.

THE Indiana experiment station has given out the opinion that no variety of wheat is rust proof, both the bearded and smooth kinds being subject to it, and the late wheats are more liable to attack than the early kinds. About eight pecks of seed per acre were found to give the best results, but something depended on the variety and condition of the seed. To avoid rust, not only should uninfected seed be used, but a system of rotation of crops should be practised as a precaution. Seed will not be injured if immersed for 24 hours in a solution of one pound of sulphate of copper in 10 gallons of water, as a safeguard against the pores of smut. Keeping the land clean, and destroying rust or smut on all other crops is important on farms upon which wheat is grown.

THE Department of Trade and Commerce has received a report from Mr. Thos. Connolly, formerly agent for Canada at Dublin, in which he states that the barley crop in Britain will be at least 30 per cent. short this year, and the long drought on the continent will diminish the supply of foreign barley. About 50,000 or 60,000 bushels of Canadian barley were sold on the Dublin market last season. The demand is increasing, especially from the large maltsters, who find it very suitable for the "crystal malt," which they ship in large quantities to the English brewers, who use it to color English ales and give them a head. Canadian barley is purchased chiefly by the Dublin men through Liverpool houses, and at the date of Mr. Connolly's report (29th August), he learned from a leading broker that a large order for Canadian barley had been received at 11s. 6d. per barrel of 224 lbs.

IT is a huge mistake to suppose that business and books do not go well together. The man of business cannot afford to ignore literature—certainly not the literature of his own business. He will be a better all round business man if he takes some enjoyment out of the field of general literature. His mind will be broadened and his vision extended, but in no case, if he hopes to rise beyond the heights of mediocrity, can he give the books and journals bearing on the work of his own trade a disdainful go-by. The Milling World remarks: "Probably one of the most important influences in bringing about the revolution from burrs to rolls was the milling journal. The journals in the field at the beginning of that great change took hold of the movement, showed its importance, instructed the millers while making the change, and aided materially and powerfully in developing roller milling, until to-day the art stands at the highest notch of perfection in commerce." It has been so in any branch of business. It will be so until the end of time. And the wise man will profit by the hint. The fool, it may be expected, will stick to his folly.

A DEAL of good natured fun was poked at Charles Smith, of Campbellford, when at the annual meeting of the Dominion Millers' Association he proposed that the miller should be licensed in order that the chopper and other small fry of the business might be effectually sat upon. Milling, of Chicago, is not sure that friend Smith is as much of a crank as his brethren considered him in introducing such a resolution. Our cotemporary interprets Smith as saying: "I grind chop all the year round for five cents a bag. In summer there's a man who runs a carding machine for me; in winter he grinds chop for five cents a bag. There's a man who cuts wood for me in summer; in winter he grinds chop at five cents a bag. There's a farmer out there who grinds chop for five cents a bag. There's some fellows who run a threshing machine in summer, but in winter they hire an old school house and grind chop for five cents a bag." Smith is right, says Milling, in declaring that such competition is clearly illegitimate. It isn't milling. The legitimate miller must pay heavy taxes. His product is under inspection. His grades are defined by authority, which, if not strictly under parliamentary act, is just as potential. The chop grinder robs him of a legitimate part of his business. "The shoemaker should stick to his last."

WE have millers' conventions and the farming community gather in Farmers' Institutes and lodges of Patrons of Industry and discuss matters pertaining to the welfare of their craft. What is the matter with millers and farmers meeting together occasionally and discussing questions of mutual interest to both? This would have been an impossibility in the distant past, but the old prejudice between these two classes of the community, happily, no longer exists. There is a strong bond of affinity, whether they all realize it, or not, between the man who sows the wheat and he who by a process of mechanical evolution transforms it into flour. "How to increase the quantity and quality of his crops," as a trade cotemporary has said, "is important to the farmer and just as important to the miller, because the increase enhances the value of his mill and his opportunity for making money." The farmers of a given locality will have advanced their own interests according as they have a knowledge of the class of wheat that will be most readily purchased by the millers of that locality. The miller must depend upon the farmer for wheat to grind, and he can only make satisfactory flour by being assured of satisfactory wheat. Nor does an identity of interests end here. A joint meeting on the lines we have suggested would have the effect of bringing to the front these various matters of mutual concern.

DOES WHEAT BECOME STRONGER WITH AGE?

THE effect of age on wheat and flour is a subject that has given rise to much discussion in milling literature at one time and another. Very pronounced views have been held on the question, and opinion is yet divided. From his particular standpoint, perhaps, one of the clearest written articles on the subject has appeared in the London, Eng., Miller, from the pen of Mr. W. T. Bates. Asking the straight question, Does wheat become stronger with age? Mr. Bates says: "Were I to put this question individually to each of my readers I have little doubt that the answer would be an unanimous yes. If, however, I asked them to reflect and consider the matter carefully, I believe I should obtain a qualified reply. The first would be spontaneous and representative of deep-rooted conviction, the result, perhaps, of prejudice resting upon a fallacy.

"I have been turning this matter over in my mind for a considerable time, and, as a result, I must say that I have modified my opinion very much, not only upon the improvement of wheat, but also upon flour. The truth is, we have generalised too much, and made a rule, resting upon a basis of truth, too absolute and unconditional. The time is come, I think, when we may venture to controvert, or at least to attempt to disprove, these accepted notions by argument and facts.

"Before coming to any definite conclusions, however, upon the matter, it will be as well to settle and define the meaning of the word "strength." The commonly accepted idea of strong wheat is wheat containing a large proportion of gluten, the characteristics of which are the ability to make a strong, tough, tenacious dough, and a good high loaf. Dough which can be stretched to a great length shows tenacity and an undoubtedly large percentage of gluten, and as such, is strong, and if gluten is strength, surely this large quantity should make ideal bread; but, although gluten is the source of strength, in the sense that it retains the fermentative gases in the rising dough, yet to speak of it as strength is to express only half a truth, as in reality it may be a source of weakness under certain conditions. However, it is quite true that without gluten we can have no strength, so therefore gluten must be the basis of all strong wheat.

"Having settled that point we have next to consider how any kind of wheat can become stronger with age. 'As the tree falls so it lies.' When the sickle severs the ear of grain from the root, we may, I think, say that the life of the plant is at an end, and that no further development can take place. There is, undoubtedly, a further hardening and fixing of the various constituents of the berry in some cases, but it is impossible that any new properties can be formed, and yet we all believe that wheat becomes stronger after it is practically dead. There must be something besides gluten to account for the improvement, for gluten does not grow in dead wheat. Yes, there is another property or condition, which is dryness. Without dryness there can be no real strength. Then since dryness and gluten in combination are synonymous with strength, the matter under consideration is brought within very narrow limits, and, apparently, easy solution.

"There are many fallacies hanging about every department of our profession, which once had a basis of truth. The truth upon which this fallacy is founded is English wheat; but what was truth fifty years ago is altogether inapplicable now, owing to changed circumstances. That is, we cannot now generalise as our fathers did, but must judge everything from its proper standpoint. Our fathers said that wheat improved with age because they had only English wheat to judge by; and we know what this means. In damp seasons it is so saturated with moisture that at best it is poor, weak, flabby stuff, although in that state it may possess a large proportion of gluten. The same wheat, however, after a spell of frost or strong drying winds loses its flabbiness and becomes relatively strong. How is this? It cannot be contended that frost or wind has produced more gluten in the wheat; no, those agencies have improved it only by driving out the superabundant moisture. The bulk of grain will be somewhat reduced, it is true, by this drying out process, and the gluten slightly increased relatively, but this will not account for the whole of the improvement. The true explanation, I think, is that the drying process has hardened the gluten and thus improved the whole mass, or in other words, by the drying out of the moisture the weak soluble gluten has been converted into strong insoluble gluten. This, I contend, is the only change that can take place, and this improvement will not always follow unless the wheat has inherent qualities when harvested. I fear that much of our last season's crop was bad beyond redemption, by frost, wind, or sun.

"Now we have to consider a different set of conditions would not produce a different result—that is, whether or not a well-developed, well-hardened, thoroughly dried wheat would be susceptible of any improvement by keeping.

"To answer this, we must fall back upon our experiences, and these satisfy us that in exceptionally dry harvest seasons we can use new wheat with freedom, and find it comparatively strong. This, usually, is the case with early harvests in this country, and early harvests can come only from exceptionally fine weather, indicating good results as above. Late harvests are generally unfavorable, but that of 1890 was an exception on account of the abnormally fine September. All who use English wheat freely will bear me out that the new wheat of that season was strong—exceptionally so; much stronger than the old wheat we are now using. The fact is, the wheat of that season actually deteriorated towards Christmas through the absorption of atmospheric moisture, which is another proof of my contention that dryness is the secret of the improvement, as moisture is of deterioration, although properly harvested wheat quickly recovers its original qualities on the return of dry weather; whereas badly harvested improves only in a small degree. This is how our English wheat acts, but what of that which is harvested under even better conditions and climatic influences?

"I give it as my confirmed opinion that, for the greater part, there is little or no difference in the strength of new or old wheat harvested under a blazing sun. When ripe, under such conditions it is just as fully developed, and all its qualities firmly fixed as they ever can be, for the reason that all the moisture, which alone can do mischief, is dried out of it. A slight toning of the various constituents may take place directly after harvesting through the outer portion being dried more thoroughly than the inner, but no material change or improvement, in my opinion, is possible under such circumstances. But were there any improvement resulting from age, we have only to consider the period of perfection; for we may take it as a fact that wheat is not exactly like wine, improving with added years, although we often hear wheat recommended as being two or three years as if, therefore, it was just so much better. There must be a period of perfection, after which there must be a decline in quality. The fact is, everything depends on the harvest, and wine, even, is no exception to the general rule; for do not connoisseurs tell us that wine of a particular vintage is superb, while that of other seasons is indifferently weak. Some wheats under certain conditions will improve with age; other wheat cannot improve, for the reason that it is perfect.

"Regarding strong glutinous wheats, it is often remarked that the new crop does not work so strong as the old. This has been said of this season's River Plate wheats, and it was also said of the Russian crops of the last year or two, but, like the poor wine, I fear—at least I know in the case of the Russian—that there is no improvement with age. Some of the poorness in that case I attribute to effete, worn-out-soil, or to the too frequent use of the same seed. At any rate it is an inherent defect which age will intensify rather than relieve. In the case of the Plate wheat, if weaker we can account for it by harvest vicissitudes, the weather at the harvest period being, like our own, somewhat treacherous, as is fully proved by the general presence of sprouted grains. Given a good brilliant harvest in Argentina and the same in Russia with good seed and good land, we may with perfect confidence use the wheat just as freely new as at at any other time. The same remarks apply to American wheat generally. I never remember hearing of new Minneapolis flours being weak, nor of new Duluth wheat being short of strength, unless, indeed, there was some defect in it. The frosted wheat which comes here under various fancy names is a mixture of strong and weak, good and bad; but if it were kept till doomsday it would not improve one iota. Of course the wheat of the plains of America is affected by harvest weather, like every other. For some climatic reason the crop of 1890—I think it was—was abnormally glutinous and strong. It was not necessary to wait until March to find that out, for it was awkwardly strong and deficient in color, owing to the excessive gluten. I will not say that perfectly developed strong wheat does not undergo some slight change and possible improvement immediately after harvest—a sort of toning and mollifying action, similar to that which takes place when wheat is washed; at first it is wet on the outside and dry within, but after a few hours the outside moisture penetrates and tempers the whole berry, and in that state it is damper, and will mill less freely than when fresh from the washer. In the case of fresh harvested wheat the outside is dry and the inside moist, so that a short period is necessary, as in the case of washed wheat, to temper and harmonize the mass; but in that process it is impossible that any new property can be developed or any improvement take place. That, at least, is my humble opinion. I refer now to well-dried and properly harvested wheat; of course, if the harvest season should be damp, and the wheat garnered in a damp condition, a longer period would be required to bring it to perfection; but in a cold, dry country like America it would be much less that in this country, where the winter generally is damp, and we have to wait for the dry winds of March to do what the early winter does for the American wheat. Some might argue that wheat is like apples, which get mellow by keeping. That might be said of damp wheat, but dry, well-harvested wheat more resembles ripe fruit which needs no keeping; that which needs keeping to ripen is gathered prematurely, otherwise it would come to perfection on the tree, did the season permit.

"Not only do I think that wheat does not improve in many cases by age, but also flour. I can fully understand the reasons for the ancient practice of keeping English wheat flour for improvement, and what I have said about wheat is applicable to flour. In some cases there will be considerable improvement through the drying out process; in others there will be none, and there may be deterioration by absorption when a damp autumn succeeds a dry harvest. In all cases flour is best for a few days' rest after milling to let it thoroughly cool, the same as a loaf of bread improves by being kept till cold, or say 24 hours before being eaten. It is said that bread is not properly cooked until it is cold, but I think we may draw the line of improvement at about 24 hours, after which deterioration certainly commences.

"I know many people make a point of crediting American flour with its superior strength on account of age, and I myself have fallen into the same error; but by the light of greater experience I now recant. I should be inclined to say that an absorbent article like flour would rather deteriorate on coming from the dry climate of America to England. If there is anything in this improvement theory, it would apply to wheat in the same degree as flour, so that flour would gain no advantage. No, I think we may give the American wheat credit for being, in most cases, beyond improvement. It is the ripe apple. So also is the American flour. When it leaves the American mill it is about as good as ever it will be, both in strength and color. I know that bakers ask for old flour, and also that many of them keep large stocks in hand to 'get stronger,' and in their case there may be some slight reason for their faith; for if flour is kept in a dry, warm loft, it will become drier, and to that extent will improve, but the improvement will be at the expense of weight; that is, the moisture will be dried out and the flour become lighter, just as the dry American will become heavier by absorption. I think, however, that many bakers are beginning to learn that the quality of the flour depends more upon the wheat from which it is made than the length of time it is kept. Time will never convert poor flour into good flour. We might as soon expect to gather grapes of thorns and figs of thistles."

COOPERAGE D'P'T.

There is a close affinity between the work of the cooper and the business of milling. The miller is either his own cooper, having a cooperage as an adjunct to his mill, or else he rests for his supplies on an outside cooperage. The cooper in any case finds one of his best customers in the miller. The object of this department is to bring each in close touch with the other and to materially advance the interests of both trades.

TRADE REVIEW.

WE are pleased to say that the depression in the cooperage industry has gradually disappeared and there is every likelihood of a large winter and spring trade.

Nearly all of the Canadian mills are now running at full capacity and barreling the largest part of their output. The new mill of Mr. A. Campbell, Toronto Junction, is now running full and turning out from five to six hundred barrels per day. The mills in Minneapolis, which consume a large part of the product of the stave mills in Ontario, have been barreling their flour in the majority of cases during the past month, the consequence being that very heavy shipments of cooperage stock have been made from Ontario points to Minneapolis; this also supplies to other points in Minnesota, the Dakotas and Wisconsin, more especially West Superior where they are having a very strong run indeed.

Owing to the financial panic in the United States, coopers all over the country allowed their stock to run down, and they are now replenishing these stocks so as to be prepared for their winter run and have dry material on hand and avoid the expense of kiln-drying, the consequence is that manufacturers of cooperage stock all over the country have now experienced a revival in business.

The prices of cooperage stock in Ontario remain about the same as they have been since the first of June and it is not likely that they will advance for the present; it is the contrary in the United States, as prices are bound to advance there, there not being the usual large quantity of staves that there is in this time of the year at the different mills. The mills not being able to get currency to pay their hands were compelled to shut down in July and August, hence there is not the quantity on hand that there usually is at the beginning of October, we expect that cooperage stock will advance considerably in the United States and it may possibly advance in Canada the beginning of 1894. The following are the prices at which stock is being offered at present, delivered in Toronto:

	Per net 1,000
No. 1 30" jointed elm staves	$5 85
M. R. 30" " "	5 50
No. 2 30" " "	3 85
" 1 24" " "	4 65
No. 1 5½ft. patent coiled hoops	6 05
" 1 6½ft. " " "	6 65
	Per set
No. 1 17⅛" kiln dried, basswood heading	4¾c.
" 1 14" " " "	4c.

These prices are for carload lots delivered in Toronto, for less than carload lots the price is correspondingly higher according to the local rate of freight.

UNITED STATES MARKETS.

The Chicago market is reported by the Northwestern Lumberman to be slightly improved and the outlook considerably brighter, although tierces do not show any advance in prices. Pork barrels are in demand at 82½ to 85c. The supply of tierce staves is being steadily exhausted and prospects are that prices will be higher in the near future. Recent sales have been made at the top price quoted below. Hoops are also scarce and bring full prices. No. 1 oak tierce hoops sell readily at $13, while white oak pork are worth $9.50. Tierce heading is selling at 14½c., but offerings are so free that unless packers buy tierces in greater quantities than they have been doing, the prices will go lower. Scarcely enough pork staves are arriving to meet the demand and prices are consequently firm. Other stock is nominal. Of the Minneapolis market the same journal says: "The flour mills are running on both full capacity and time, and are barreling most of their products, thus keeping the cooper shops busily engaged with their orders. In fact the rush of business just now is so great as to keep them delivering nights. There is but little change in the stock market. Shipments are freer than they have been for some time, but as they generally apply on former contracts, there is little movement to note. With the present rush of business it is probable that manufacturers will have no difficulty later on in the disposal of their products. There is a plentiful supply of hickory hoops on the market this fall, and stocks at different shops are still very large. It is thought the demand this year at this point will not be more than half what it was last year. Consequently the price is lower by 25c. Within the next few weeks some of the shops will probably look around for their yearly supply of elm hoops."

WIRED HOOPS FOR BARRELS.

WHILE on a recent visit to Chatham, Ont., a MILLER representative, in taking his usual round among the mills was much interested in inspecting the new cooperage in connection with the Kent mills. Both Mr. Stevens and the T. H. Taylor Co. of this town are using a flour barrel which is certainly a great improvement on the package formerly used. The barrels referred to are made from kiln-dried stock and hooped with a colored wooden hoop, reinforced by coppered steel wire which surrounds the hoop embedded in a slight grove. The cooperage shop of the Kent mills has turned out these packages for about three months, making from five to six hundred a day. Well-seasoned staves are first put through a recently constructed "Andrews" dry kiln properly set up in forms by boys, after which they are windlassed in a steam windlass, and trussed, chanfered and crozed also by machinery. Boys nail the hoops on forms, which are so constructed that all hoops are made of exact size, while others put the wire around the hoop and twist it by an ingenious little hand machine. The coopers, receiving the barrels fired, trussed, chanfered and crozed, and the hoops ready made are enabled to finish from 100 to 150 barrels per day each. The wire in itself is much stronger than the wooden hoop, which makes the wired hoop especially adapted for kiln-dried packages, the same being reputed to give much trouble by bursting ordinary hoops in damp weather.

The Chatham Wired Hoop Co., (limited) owners of the patent for the Dominion, seems desirous of establishing for the cooperage on which their hoops are used the highest possible reputation, as shown from the fact that they offer a considerable discount on royalties to firms using kiln-dried stock. This very commendable policy is calculated to do much towards elevating the standard of cooperage generally. Mr. Stevens, who has sent out about 30,000 of these barrels, shows a justifiable pride in his production, and to say that he is entitled to credit is only doing him justice. Customers and forwarding agents generally have not been slow in expressing their appreciation by letter and personal interviews. The cooper shops supplying the T. H. Taylor Co. have also introduced this style of package, in the manufacture of which they use no machinery.

ELECTRICAL POWER.

IN the present day it is not enough that the proprietor, or his expert in charge of the mechanical operations of mill or factory, should be possessed of an intelligent knowledge only of the uses of steam and its various properties. It is important that he should fully understand these things. But with the developments in electricity and the extent to which this newer power is being applied to manufacturing purposes, it becomes almost as necessary, that the mechanical manager of to-day should know as much of the uses of electrical power as of steam power. How to handle the electrical motor; what to do when an awkward balk asserts itself, is a part of his education that he cannot afford to neglect. On this line the matter of reversing a motor is made the subject of intelligent discussion by a writer in the Tradesman. He says: "To reverse the direction of any electric motor it is only necessary to change the direction in which current passes through it. But simply taking down the wires and attaching the + wire where the − wire formerly was, will not answer. That will cause the motor to run in the same direction as before. The way to do it is to take down the connections between the brushes and field magnets and change the direction of the current there, through one, either through the armature, or through the field magnet coils. This will change the direction in which the armature will revolve.

"Current always flows from the + or positive line wire into the − or negative one. Here is a handy rule for telling which way the current is passing in any dynamo: First, find the direction in which the lines of force are passing between the field magnets; this can be done with a pocket compass. Hold the instrument over the dynamo, half way between, and six inches above the armature; the compass needle will immediately arrange itself in line with, and pointing directly from one field towards the other. The north end of the compass needle will always point towards the south pole of the motion field magnet, and as the lines of force always travel from the north to the south field of any motor or dynamo, it is known that the lines of force are always passing in the direction pointed out by the north end of the compass needle.

"We can now lay the hand on the dynamo, the thumb pointing in the direction taken by the lines of force. The first finger pointing parallel with the armature winding, while the other fingers are bent slightly, and point around the armature in the direction of its travel. The flow of current in the armature winding will always be in the direction toward which the first or index finger points. Only, bear in mind that the armature coil is always supposed to be between the eye and hand while making the test. Thus, if the dynamo run in a certain direction called "right-handed," the right hand can be used to bring in all the conditions mentioned above. But if the dynamo runs in an opposite direction, the left hand must be used.

"This matter is very useful in determining which way a motor will revolve after it is started up. It is only necessary to find which way the current will pass in the armature, then lay on the hand as before, with index finger pointing in the direction current flows. The thumb points in the direction taken by the lines of force, and the other fingers will, when slightly bent, point in the direction in which the motor armature will revolve. Always bear in mind, that with a dynamo and motor connected in the same circuit, the armatures will revolve in opposite directions."

FIGURING A WAY OUT.

THIS is the somewhat clever way in which a Nebraska writer figures out a profit for the miller. The conditions will vary some in different localities, and the basis of calculation may be altered, in a measure, but the rule, if worth anything at all, ought to apply relatively to most localities. This writer says: A bushel of wheat makes forty pounds of first grade and seven of second grade flour; six of shorts, six of bran, and one pound waste. At present prices forty pounds best flour retails for eighty cents; seven pounds second quality, eleven cents; six pounds bran, four cents; six pounds shorts, six cents, or a total of one dollar and one cent for a bushel of wheat costing fifty cents. It costs forty cents to raise and market the bushel of wheat, and it costs probably five cents to grind it, but say it is ten, and then figure out whether the farmer or the miller will first be able to start a national bank and buy a seat in the senate.

A roller mill with all modern improvements, with capacity of 75 barrels per day, can now be contracted to be built ready to start grinding for $7,000, but say it costs $10,000.

Such a mill, located at the central corner of four townships of six miles square each, could be built at a cost of 12½ cents per acre, or $19.25 per quarter section of the land in the four townships. The cost per quarter would be paid on the saving on a single forty-acre crop wheat. There is, however, a serious objection to such mills, for they would be socialistic, and possibly even anarchistic, but they would be money-makers for their owners.

ALWAYS A GOOD REASON.

IT is indisputable that the number of boiler explosions in this country is alarmingly great, and it is equally true that a boiler does not explode without there being a very good reason for it—a very good reason and a very simple one. There was a time when it was believed by many that there were hidden causes for boiler explosions, and a rather flourishing, if not remunerative, business was done in the theoretical manufacture of some mysterious gas that could never be made to materialize except just at the time when no one had time to detect its presence, and the boiler went to pieces. There are, perhaps, still a few left who believe in the gas theory of boiler explosions, but their number is very small indeed, so small as to make no impression on current opinion. An overwhelming majority of engineers at the present day believe that if the cause of a boiler explosion is looked after in the right way, it will be found without the necessity of making some old gas theory do service, or inventing a new one; without bringing into the argument any unaccountable or unheard-of action of the water, or in any way going outside of what plain people can understand.

A CANADIAN miller has been discussing the question of scalpers, in the English Miller. He is not overly favorable to fine wire for break scalpers. "Nos. 16 or 18 wire," he says, "are fine enough for a first break scalper, the succeeding ones, of course, being finer. The advantage in using these numbers consists in being able to separate the coarse, germy stock and chips from the break chop, thus preventing it from going through the succeeding reductions on the corrugated break rolls, where a certain amount of it is sure to be finely ground, and reserving it for the gentler action of the smooth sizing roll, where it is flattened out and not reduced to powder, as would be the case were it reduced on the break rolls. Of course, in using fine wire on the scalpers, you may not require to reduce so many middlings on a sizing roll, but the middlings you make will contain more finely-cut bran and germ, which is very hard to separate afterwards, and you will make more break flour of a poorer quality, besides reducing the capacity of the break rolls. In reducing any wheat, especially hard wheats, a certain amount of the bran is broken into small pieces from the very start, which it is much better to separate at once, instead of making it run the gauntlet of the succeeding breaks, a slight pressure afterwards on a smooth roll being sufficient to free middlings that may adhere to it. A light suction on all stock after being scalped, and before further reduction, is advisable, as it removes all fluffy material, light branny flakes, beeswing, etc., which may be sent to bran bin, instead of being further reduced on the break rolls, thereby enhancing the color of the flour."

* * * *

W. J. Harris, an English agriculturist, who has recently travelled throughout Australia and New Zealand, thinks that there is no country in the world which, from an agricultural view-point, has more to recommend it than New Zealand, Mr. Harris is also eloquent in his praise of the agricultural capabilities of Australia, respecting which he remarked: "That he went there believing that he should find neither soil nor climate suitable for wheat growing on a large scale, but he returned with the conviction that there are at least fifty million acres, thus far untouched by the plough, of asgood wheat-growing land as can be found in the world, and that the climate and rainfall over this area are suitable and sufficient."

* * * *

Prof. Saunders, Director of experimental farms, says of his recent tour of inspection through Manitoba: "In some localities the thresher is turning out as high as 20 to 27 bushels per acre; in others the result is very disappointing, ranging from 4 to 8 bushels, the lower yields covering some of the best districts. On account of the variable character of the crop it is difficult to estimate the average yield over the whole province, but judging from the returns received from different sections, it is not likely to exceed 15 bushels per acre. Most of the wheat, however, is of good quality and will grade high. Barley has also suffered, the grain is light and the yield lessened. The yield of oats is better. Throughout the Northwest Territories the crop will average a higher return, and in some districts the yield is most excellent both in quality and quantity. This is more particularly the case in the Indian Head district, where the Experimental farm is located. North of the railway line crops are very heavy. Threshing was progressing, but only three farmers in that district were far enough advanced to report results. Two of these had 40 bushels and one 32 bushels to the acre. The average yield of wheat for this district will probably be fully 25 bushels, some estimate it as high as 30. The wheat crop in the Territories is good as far as Balgonie, but becomes lighter west of this point. It is also good for a considerable distance east of Indian Head, but becomes lighter as it approaches the Manitoba boundary. In Manitoba the wheat crop in many places looked as heavy as it did in the Territories, but a careful examination of the heads showed that a large proportion were blank at the tip."

* * * *

"My recent visit to Manitoba," said Secretary C. B. Watts, of the Dominion Millers' Association, "is the seventh I have made to the Prairie Province. I was there when the boom was on, and when it broke. Five years elapsed between my visit of the past month, and the one just previous. Winnipeg is in good shape. From the first time I visited that city I had great confidence in its future, and anything I have seen of it since only goes to confirm that view. My special business to Winnipeg this time was as a member of the western board to select grain standards, having been appointed by the government, as representative of the Dominion Millers' Association." I enquired as to the crop outlook. "Manitoba has a fine crop this year," replied the Millers' secretary, "though the yield varies very widely in different localities. In places where the drouth was most felt figures are given as low as five bushels to the acre, and again in others the yield will run as high as forty bushels, though it must be admitted this last figure is exceptional. The crop has been harvested in splendid shape; threshing is going on and a large amount of careful stacking has been accomplished. We will hear nothing of frosted Manitoba wheat this year, and little of smutty wheat. The weight, however, is below the average. I saw wheat that would not weigh more than 55 pounds. My impression is that the total crop will exceed that of last year, averaging, perhaps, 20 bushels to the acre." What was the result of your work on the board of grain examiners? "Better than at first I thought it would be," replied Mr. Watts. "There was a strong disposition with the farmer-representatives of the board to keep the grades down. They had become imbued with the idea that the lower the grades the more money it would mean to themselves. I must say, however, that after a vigorous discussion the first day in which the contention for higher grades was determinedly fought by Mr. McLaughlin, ex-president of the Miller's Association, and myself, a different view was taken of the matter. The grades are some lower than last year, but not as high, as, I think, the quality of the crop warrants. Why Manitobians, who have any breadth of view worth naming, should want to pursue this depreciatory policy is one of the things it is difficult to understand. The country has everything to gain by holding up a high ideal in the matter of wheat production and especially when the character of its wheat merits this. Last year it was known to everyone that Manitoba No. 2 hard was equal to Duluth No. 1 and was so regarded on the foreign markets. Let Manitoba wheat, as can be done, be placed as the wheat by which other countries shall measure their grains. Instead of talking of Manitoba wheats as being as fine as those of Duluth or Dakota, change the position and make Manitoba the ideal that it is necessary for those places to reach. I have every confidence in Manitoba becoming the great wheat-growing country of North America, and it is unbusiness-like and unpatriotic not to realize this and stand firmly by the high position the country has already attained in this important matter." "It was very gratifying," remarked Mr. Watts, responding to a suggestive comment by the interviewer, "to observe the change of feeling that is rapidly coming over the farmer in his attitude to the miller. The old notion that the miller is the sworn enemy of the farmer exists to a very slight degree anywhere now. In a measure, perhaps, when Mr. McLaughlin and myself took our seats at the western board a few weeks ago, there was an idea in the farmers' minds, that we had come there for the one purpose of carrying out some dark scheme of the miller, that would operate to the serious detriment of the farmer. I bid good-bye to the Manitoba farmers, whom it was my pleasure to meet, convinced that they saw that the interests of the miller and farmer are so closely interwoven that anything that injures the one, must operate in like measure to the injury of the other, and the success of the one is the success of the other. Why, where is the final outlet of our wheat crop? Is it not at the mill, there to be ground into flour."

DRIVING ROLLS.

ROLLER machines used in flour mills for reducing wheat are best driven with two belts instead of one, as is much in vogue, says the Mechanical News. They should be driven on both sides direct from the main driving shaft without the use of a countershaft. Neither belt should be crossed. Crossing belts is more or less a vicious practice at all times and under all circumstances, and should not, as a rule, be resorted to except under compulsion. However, cross-belts may be tolerated and endured in many places and for many purposes, but driving rolls with cross-belts is not among them. Very many use cross-belts on rolls, as a matter of fact, because they suppose it has to be done, knowing no way in which a cross-belt can be run open without reversing the motion.

It is just like standing an egg on end, simple enough if one knows how. To open a cross-belt on a double stand of rolls requires two carrying pulleys, both of which can be used as tighteners, while doing away with the common tightener used on such mill. In all, five pulleys are used for the open belt against four for the cross-belt. The best arrangement for carrying the extra pulleys is to procure four pieces of timber, say 4x6 when very long, and then 5x8, that will reach from basement floor to ceiling.

These timbers should be placed on end, two of them on each side of the driving shaft far enough away from driving pulley to allow for ample clearance, and securely fastened both at top and bottom. Journal boxes for the carrying pulleys, or rather adjustable tightening frames for supporting and moving the pulleys up and down, should be fastened to the posts near the floor, or at least far enough below the driving pulley belt for clearance at all times. It will, of course, be understood that the four posts will be so arranged as to bring all the pulleys, drivers, machine pulleys and carrying pulleys, in line in the ordinary way.

To get the belt on we start from the floor by passing the belt under one of the carrying pulleys, then up and over the machine pulley on that side; thence down and under the driving pulley and then up over the other machine pulley, thence down again and under the other carrying pulley from the outside, when the two ends of the belt will come together then they can be fastened together, and the job is completed. Care should be taken to run the carrying pulleys up the full height before fastening the belt. Each belt on a roller machine should drive one fast and one slow roll, as in that way the work is more effective, and makes the strain equal on both belts.

TRADE NOTES.

ATTENTION is directed to the advertisement, appearing in another page, of the Chatham Wired Hoop Co., (limited.) We are authorized to state that parties who contemplate the introduction of the new cooperage will be welcome to inspect the process of manufacture at the Kent mills, Chatham. We understand that royalty charges are very moderate and the outfit required for manufacturing are insignificant in point of cost.

NEWS AND NOTES.

Canada has 600,000 tons more hay for market this season than last.

Efforts are being made to extradite Leon M. Carrier, the Quebec flour absconder. He is in Denver, Col.

The remarkably high grade of the wheat being received in Duluth elevators and flour mills this fall, of the crop of 1893, is astonishing, it is said, all grain men in the Northwest. There is more No. 1 hard wheat than for years, nearly half of all the wheat that comes being of that quality.

Millers, acquaint yourself with all manner of information pertaining to improvement of the wheat products with which you have to do, and after your good mills and good millers are supplied with good wheat—the foundation part of good milling—your road to success will be an easy one to travel.

Says a London, Eng., report: The yield of the wheat crop in New Zealand is estimated at 8,397,600 bushels, or 1,880,000 bushels under last year's return of 10,257,600 bushels. In 1891 the out-turn was 5,723,200 bushels. The area sown was 1,297,447 acres, or about 51,444 acres less than in the previous season. Taking the food and seed requirements of the colony at 4,349,600 bushels, there would remain apart from stock of old crop about 4,028,000 bushels for export.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its hearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

GROWTH OF FLOUR-MILLING.

THERE is good reason to expect, that there will be a considerable development in milling operations in Russia during some of the years yet in the future. The people of that country have already got moving on that line and they seem to be sufficiently satisfied with the effort to believe that there is an encouraging milling future before them. Some are sanguine enough to think that the time is not far away when the quantity of wheat consumed in milling in Russia will preclude the necessity of shipments of wheat to the western markets of Europe. This is a question, however, that can no more than be guessed at for the present.

The fact that flour milling is to any reasonable degree being carried on in Russia is suggestive of the general growth of milling operations in various European countries. We noted last month the inception of steam roller flour milling in Japan. No one dreams, perhaps, of competition in flour production from the land of the Rising Sun, but the world does move in this age, and would appear to move very quickly, too. Flour-milling is undoubtedly making marked progress in Great Britain, its mills are multiplying, and the adoption of modern methods there is now about as universal as on this side of the water. Meanwhile the increase of milling capacity goes on both in Canada and the United States, so that wherever we turn, whether at home or abroad, competition among the mills becomes keener. At home there are more mills than before to supply the demand. The field for export is narrowed to the extent that the flour producer in export fields has acquired the ability to supply the local demand. It is to be granted that with the natural growth of population there will be an added demand for flour and bread the world over. Which is just now getting ahead in the race, the flour-producer or population, is a matter that will have its influence, under all these conditions, on the markets of the present and in part of the future.

COMFORT FOR BRITISH MILLERS.

According to recent estimates of the Washington Agricultural Bureau, if that very variable and dubious authority can be relied upon, United States wheat crops this year are not likely to exceed in any large measure the requirements of home consumption. The Millers' Gazette, of London, Eng., finds in this possibility a grain of comfort for the British miller. American millers will not be in a position to flood the British markets with their flour, thinks our cotemporary, for the simple reason that the wheat will not be forthcoming. The argument it follows up in this manner: "True it is that there are large stocks of old wheat on hand, probably 75 million bushels; but that is a very moderate total compared with the actual exports of the past two seasons, viz., 192 million bushels in the past season, and 225 million bushels in 1891-92. During the past season ended June 30, no less than 16,620,000 barrels of flour, representing nearly 75 million bushels of wheat were exported, of which 10,361,860 barrels came from the United Kingdom, and 1,549,000 barrels to other European countries. To keep up this rate, nearly every bushel of wheat available for export to Europe in the present season of 1893-94 will have to be sent in the shape of flour, a thing manifestly impossible. The British miller may, therefore, pluck up courage—if he has ever lost it—for it is as certain as such matters can be, that the competition of American flour will be less than in either of the two previous ones. At present, it is true, there are no signs of any falling off, for since August 1, no less than 200,000 sacks per week have been sent to Europe. A somewhat pertinent comment upon the past year's export business of some American millers, is to be found in the fact that the £10 shares of a well-known large American joint stock mill are to-day not worth more than £2 to £3."

THE PRESERVATION OF FLOUR.

Mr. Ludvig Fromm, of Kotzschenbroda, Germany, has obtained a patent for a new method of preserving farinaceous products. In his specification he says: "This invention relates to a method of preserving flour and farinaceous products, and consists in the admixture to the substance to be preserved of a powder or 'flour' of hazel nut. In preparing the hazel nut flour, the kernels are first removed from the shell, and then (preferably after being roasted) are ground or reduced to powder; only the white substance of the kernel, however, is ground. This powder or flour is added to the goods to be preserved—cereals, pulse, or the like—in a proportion varying from 5 to 25 per cent., care being taken that the mixture is as thorough as possible, as it is important that the fatty element of the powdered hazel nuts shall pervade or permeate the whole of the substance. This fat does not become rancid, and at the same time acts as a deterrent against insects and caterpillars. The flour so mixed acquires, moreover, a property which enables the bread or other goods made of it to keep much longer than similar goods made of ordinary flour, the fatty or oily element preventing the absorption of moisture to a great extent, and consequently the formation of mould, mildew, or similar growths. Besides, the great quantities of albumen and fat contained in the hazel nut pulp enhance the value of flour or other product as such; as nutritious substances, however good in themselves, will only fully be taken advantage of by constitution of the body if the albumen and fat they contain are in the normal proportion to the hydrates of carbon.

CURRENT THOUGHT.

"DESPITE the commands of experience and the warnings of friends and the milling press," says the American Miller, "some millers persist in consigning flour whenever they run out of orders. They are not far-sighted enough to see that dealers who can get a miller's flour at their own price in a central market, will not pay the manufacturer's price at point of production. Many, we regret to say, are such chronic consignors that they cannot refrain from consigning to markets already depressed with large stocks. They do not refrain from swearing about the returns, although they have themselves to blame for the unprofitable business. The dealer and the sheriff are the only ones to profit by a miller's persistent consigning."

THE Commercial, of Winnipeg, Man., thinks that Manitoba wheat should be in demand this year for mixing eastern and other soft wheats. "The quality of the crop this year," it says, "is just what is required for mixed purposes. It is bright and flinty and should produce an extra strong flour, thereby making it just the thing required for imparting strength to the soft wheat flours, by judicious admixture. About the only domestic demand for Manitoba wheat outside of our local mills, comes from Ontario millers, and in some years this demand is quite an important item. With the poor crop of spring wheat in the sister province, the millers of Ontario should require a considerable quantity of hard Manitoba to grade up their flour. The quality of the Manitoba wheat is such that it should be sold this year at a sharp premium over the soft wheats. It is simply a superb wheat for mixing; and flour from the ordinary eastern wheats will be vastly improved by a liberal admixture of Manitoba."

BRITISH millers and bakers continue to discuss the pros and cons of foreign flours as compared with the home article. Is the strong preference that exists in some quarters for the imported flour based on a genuine difference in quality? This is what these people are busily asking one another. Do we get as big a yield from the foreign as we imagine? is the way a writer in the British Baker puts the question. At what sacrifice to the quality of our bread do we force in as much water as it will hold? "Careful consideration of the subject," says the British Baker, "will show we do not get that extra water-absorbing capacity for nothing. Some of our trade do not sufficiently realize that if we want to sell a large quantity of bread the less water we sell in it the better, unless we counteract the depreciating influence of the water by using a higher grade of flour. Let us take an extreme case. A sack of American first baker's will at the present time be about 2s. per sack less price than country roller whites, and, for the moment, we will say the American will make five quarterns more bread than the country, equaling a further 2s., that is, a total of 2s. per sack, or one halfpenny per quartern. But the first baker's grade and the country separately turned into bread would be more than a great contrast. The first baker's would barely be saleable for a family trade, but might fetch fourpence per quartern, whereas the country would more easily sell at fivepence, and would very closely compete with a well-known bread which I recently purchased at fivepence halfpenny. One halfpenny saved, one penny lost. If with an ordinary family trade a man wants extra strength or yield, he must either buy a higher-class bag or increase the quality of the remainder of his mixture. If he does this, wherein is his saving?"

THE FLOUR MARKET.

In so far as prices remain steady, the flour market is in a fairly healthy condition. Though the tone is encouraging, sales are light. For the present local trade in city and country would appear to be pretty well supplied. Export trade is slow. There has been considerable enquiry from abroad, but prices offered are too low to give any incentive to large trade. The decline in wheat markets has also had its influence in exciting to caution on the part of buyers. The Northwestern Miller says: "All the millers report that sales are light and greatly under the output. One or two firms report having a liberal supply of orders on hand, and are glad of the opportunity to catch up. Others are simply meeting business as it comes to them. There is a decided disposition to sell only for prompt shipment. Foreign business is still very meagre, the continent at present taking practically nothing. Both patent and bakers' are bid for, but usually the bids are not within the reach of millers by 6d. to 1s. On what few sales are effected, very close figures have to be made. Patent and bakers' are quoted a shade lower than they were a week ago, but millers are reluctant to give concessions, except as the lower cost of wheat permits."

PRICES OF FLOUR AND MEALS.

Toronto: Car prices are: Flour (Toronto freights)—Manitoba patents, $3.80 to $3.90; Manitoba strong bakers', $3.60 to $3.70; Ontario patents, $3.25 to $3.40; straight roller, $2.90 to $2.95; extra, $2.50 to $2.75; low grades, per bag, 90c. to $1.10. Bran—$11. Shorts $13.50.

Montreal: Flour—Winter wheat, $3.90 to $4.10; Manitoba patents, best brands, $3.85 to $3.90; straight rollers, $3.10 to $3.15; extra, $2.90 to $3.05; superfine, $2.60 to $2.90; Manitoba strong bakers', $3.70; Manitoba strong bakers' best brand, $3.70. The demand for oatmeal is fairly good and prices hold steady. Standard bags, $2 to $2.05; standard, bbls., $4.20; granulated, bbls., $2.25; do., bags, $2.05; rolled oats, bags, $2.10; rolled oats, bbls., $4.30 to $4.40. Feeding stuffs are offered more freely and the general tone of the market is easier. Bran, $14.50 to $15.50; shorts, $16 to $17; mouillie, $22.

Winnipeg, Man.: Flour—Prices in small lots to the local trade are quoted: Patents, $1.80; strong bakers', $1.60; XXXX, 70 to 95c.; superfine, 75 to 50c. Oatmeal is unchanged. Rolled oats quoted at $2 to $2.20 per sack. Granulated, $2 to $2.20; standard, $1.75 to $2; cornmeal, $1.60 to $1.65; beans, $1.80 to $1.90 per bushel; split peas, $2.40 to $2.50; pot barley, $2.40 to $2.50; pearl barley $4 per sack.

Office of the CANADIAN MILLER,
October 14, 1893.

THE GENERAL SURVEY.

CROP estimates are coming in fast and thick from many different authorities. We have had the annual report of the Hungarian Minister of Agriculture, which has provoked some lively criticism. His estimate of the world's production of wheat this year is 2,279,000,000 bushels as against the official average of 2,280,000,000 annually for the last ten years. The deficit to be filled by importing countries is given at 379,000,000 bushels. The surplus available in exporting countries to satisfy this demand is 378,664,000 bushels. The Secretary of the Liverpool "Corn Trade News" pronounces the Hungarian estimates "not only worthless but mischievous."

The New York Sun has made an elaborate, and, what is considered by not a few to be, a careful estimate of the world's wheat product. The Hungarian Minister is here, also, brought to book. He is charged with taking "no account whatever of the needs of the people inhabiting the islands of the sea, and the tropical lands, which grow no wheat and yet consume from 35,000,000 to 40,000,000 bushels annually. Neither has he taken cognizance of any importing country outside of Europe, although the exports of the United States to such countries has averaged 23,454,000 bushels per annum during the last five fiscal years." The Minister's figures dealing with the United Kingdom, Germany, the Netherlands and Switzerland are all challenged, as being widely astray, by this same critic. The Sun places the United States harvest below home needs, while the world's product in 1893 is thought to be below the world's requirements by some 196,000,000 bushels. This is said to be partially offset by an extraordinary reserve of something near 100,000,000 bushels in the United States.

Mr. Robert H. Lawder, of Toronto, who has for years been a close student of crop conditions, has a lengthy letter in the Shipping and Commercial List, of New York, in which he deals with the estimates of the Hungarian Minister and other estimates. Mr. Lawder considers the statistical condition to be unpromising. He says: "If the world's wheat crop in 1892 was sufficient to meet all requirements during 1892-93, and leave very large reserves to be carried over into 1893-94; and if the world's wheat crop of 1893 shall prove to be as large as that of 1892, as appears to be the case, the deduction must be, that the reserves at end of the present crop year will have undergone another increase equal to that which has taken place in 1892-93. On the other hand, prices are unprecedentedly low, and it may be assumed that the consumption for human food will be increased, that a larger quantity of wheat will be fed to cattle, and that a considerable quantity of wheat will be withheld from market. This last result appears to have already happened in British India, where, with a wheat crop in 1893 about 60,000,000 bushels larger than 1892, the exports since April 1 have only been about one-half of those in the same time in 1892." As to the future of prices the Toronto expert contends that the supply is too abundant to justify any expectation of permanent improvement.

The variety of opinion on the crop situation gives grounds for the conclusion reached in "The Market Situation," of Milling, that "The wheat situation this year is very complicated and the best judges see nothing ahead, or immediately ahead, which promises better times."

New wheat is coming in slowly. The prices do not tempt farmers, and one hears considerable in confirmation of Mr. Lawder's statement that it is being largely fed to cattle.

More and more the future of the wheat markets becomes a question of speculation. This uncertainty is the unfavorable element of the situation. We make calculations at the commencement of a crop year based on certain supposed reserves; but with the notions that prevail among the farming community these times it is almost impossible to ascertain nearly correctly the real reserves that are in farmers' hands. We censure the wheat speculator for the tyrannizing part he ofttimes plays in disturbing the markets, that he may carry his own ends. But the farmer himself is becoming just as prominent as a bull or bear, according as he thinks his interests can be best served. It is this hiding the facts, a suppression of the true story, that is playing hob with markets everywhere. For this very reason the situation may not be as gloomy as seems to be the case. There may be something more than sentiment in taking a hopeful view of the future.

CURRENT PRICES OF BREADSTUFFS.

WHEAT: Toronto: White, 57c.; spring, 56c.; red winter, 56c.; spring, Midland, 59c.; No. 2 hard, 72c.; No. 3 hard, 67c. The Grain Trade Bulletin, of the Central Wheat Buyers' office, reports: Toronto: "Car wheat worth 60c. to 61c. on track, Toronto, for fall wheat. Street prices: Fall, 62c.; red, 61c.; goose, 59c.; spring, 61c. Ontario wheat, car lots: Ontario fall wheat offering freely at 58c., both red and white, and some red and mixed at 57c. straight. Hardly any demand, exporters offering 56c." Chicago: Wheat market quiet with only a moderate business. At the opening May commanded a premium of 7⅞c. over December, but at the close was bringing about 7½c. over December. Duluth: No. 1 hard, 62¾c. for October; No. 1 Northern, 61¾c. for October; No. 1 hard, 64¼c, for December; No. 1 hard, 71¼c. for May; No. 1 Northern, 70¼c. bid for May; to arrive, 61¾c. St. Louis: 61⅛c. for cash; 61¼c. for October; 62⅜c. for November; 64⅛c. asked for December, 71¾c. to 71⅞c. bid May.

BARLEY: Toronto: Feed is held outside at 38c. and is quoted at 36 to 37c. Sales of No. 1 Canada in Buffalo made 77 to 78c., high-class brewers being the purchasers. Buffalo: No. 2 Western 61 to 62c.; state, 68 to 70c.

OATS: Toronto: Quiet and fairly steady. No. 2 white, 35c.; No. 3 white, 34¼c.; No. 2 mixed, 32¾c. Chicago: October, 27⅝c.; December, 28½c.; May, 31⅝c.

PEAS: Toronto: Dull; 52 to 53c.

RYE: Toronto: No. 2 quoted at 54c. At Toledo No. 2 sold at 48c.

A NEW WHEAT COMPETITOR.

THE Argentine Republic is stepping to the front as a competitor in wheat, whose growing strength cannot be disdainfully cast aside. In a recent English consular report, Mr. W. H. Gastrell refers to the rapid development of Argentina from an almost purely pastoral to a cereal-producing country, pointing out that, while in 1880 the Republic imported 177,000 tons of wheat, it has this year a surplus available for export of 1,040,000 tons. He remarks further that, geographically considered, the country is remarkably well adapted for the cultivation of cereals. Its vast cultivable areas and the extensive facilities for transport provided by its railway system, render its potentialities as one of the sources of the food supply of Europe a subject of considerable interest. For the present year the total area under cultivation is estimated at 12,500,000 acres, and the possibilities of extension may be judged from the statement that the area said to be suited to cultivation in the whole country is about 240,000,000 acres. As the distance to ports of shipment from the tracks at present under wheat crops is usually short, it can be produced and shipped at an exceptionally low cost, this depending very much, Mr. Gastrell says, upon whether the colonist and his family perform the work themselves or have to pay for hired labor. A calculation is made, based upon the average yield of one ton from two and one-half acres, that, allowing for all expenses of transport, etc., the wheat, if sold in Europe at about 22s. per quarter, would return a net profit of about 4s. 6d. per quarter. The United States Miller points out "that the price mentioned is considerably below the lowest yet reached in England, and as the quantity available for export is already sufficient to make it an appreciable factor in calculating the total food supply, the progress of this comparatively new competitor in the world's markets will be watched with increasing attention."

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If you require a pump for any duty, of the latest and most improved pattern, and at close prices,

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BY THE WAY.

THE future of wheat production in Great Britain is proving a matter of serious concern to millers and agriculturists in the United Kingdom. A report of the English Board of Agriculture conveys the intelligence that the area sown to wheat in Great Britain has sunk from over 4,000,000 acres in 1863 to 1,897,488 acres in 1893. This decline has not come at a jump, but has been a matter of growth during these thirty years. From more than 4,000,000 in 1863 it had declined to 3,500,000 in 1873. Two years later, in 1875, the figures changed to 3,300,000. This year the decrease is 322,-250 as compared with last year.

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These conditions are accentuated by the terribly low average of prices that have prevailed in Great Britain for some time. Low prices have ruled the world over. The cost of wheat production, however, is not the same in all parts of the world. And it is here that the British farmer, with his high-priced lands, is feeling the effects of competition with the farmers of the newer world, where land is comparatively cheap. Must wheat production then be given up in the United Kingdom? This is the question, to quote from a letter to the CANADIAN MILLER, from Mr. W. R. Mallet, a large miller, of Exeter, Eng., and a name familiar in milling literature, that "is widely and seriously occupying men's minds in Great Britain." As a means, perhaps, of shedding some light on the question, Mr. Mallett writes: "I am anxious to get some reliable information at first hand from parties in the various grain producing countries as to the first cost of growing wheat under differing climates, soils, and conditions of labor and taxation, which will be condensed into a paper, I have consented to read this autumn before the leading agricultural associations of the west of England."

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The means adopted to secure this information is the issue of a circular containing a number of leading questions touching the matter under consideration. The circular is headed: "Wheat Lands Under Cultivation," and the questions propounded are as follows: 1—(a) Is the land usually owned by the occupiers or rented? (b) If owned, what is about present selling value per English Statute acre or an equivalent, taking land of a quality fairly representative of your district, county, or government? (c) On what terms are real estate loans obtainable? (d) If the land is rented, or hired: What is usual or fair average rental, also taking fair representative quality, per English acre or an equivalent? 2—What wage is usually paid for farm labour, and hours of work? 3—I shall value any information you would give as to: (a) Cost of manure, if used; (b) Cost of working and preparing the land; (c) Cost of seeding; (d) Cost of harvesting and threshing. 4—What is fair average crop? 5—Can any other crop be raised in the same year? Of what value would such crop be? 6—Of what value is the straw? 7—What is total cost of transport, road, rail, or water, from the farm to nearest ocean-shipping port? 8—At present level of wheat values, say 30s. per English quarter of 496 lbs., for good wheat delivered in London, does wheat-growing pay, and is its production increasing or decreasing with you? 9—At this level of price what is the net return to your grower? The MILLER cheerfully publishes these questions and will be glad to learn that this act will have had the effect of furnishing Mr. Mallett with information from Canada that will be helpful to him in the preparation of his forthcoming paper.

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The MILLER has, at various times, referred to the work of the Millers' Tracing Bureau of the United States, and the success that has attended the efforts of those, who have been handling the business. We learn that this work has proved so valuable to exporters, that the rail-carriers have detailed men to send out notices every day of the flour loaded into vessels for export. Before, exporters were notified of day of sailing and name of vessel taking flour whenever a clerk happened to have time to attend to it. The bureau has undoubtedly done good work, the one matter of regret, as the American Miller says, is that petty jealousy and strife have prevented a large number of flour exporters from making use of the bureau. United States millers would appear to be constantly at war with each other, and, ever and anon, their associations are rent assunder by the Kilkenny cat methods that are employed to keep the concern, going. The contrast in this respect with the Dominion Millers' Association is very marked.

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The members of the several boards, that fix the grain standards for the year, have had a busy month. In our Scribe page is published an interview with Mr. C. B. Watts, who returned a fortnight ago from Manitoba, where he had been serving as a member of the western board. Many interesting and suggestive facts are given by him in connection with wheat production in the Northwest. The disposition seems to have been general, both in Ontario and Manitoba, to lower the standards of wheat and other grains. In our own province, from all accounts, the effort has been more successful than in Manitoba. Wheat, it is said by some, will grade about the same as last year, but from information that comes to the MILLER we are inclined to the opinion that the standard will in point of fact be lower. We hear of a tendency to give confusion to some grades by so mixing the grain that it will be difficult to tell just what is the real quality of that which is offered. A like difficulty, it is said, exists with oats, where black and white, have so become part of the same grade, that it will not be an easy matter to properly locate the place of some. With grades of grain, as with the speech a man will use, the more clear-cut and distinct it is, the less trouble there is to understand exactly what is meant, and much confusion is saved afterwards. One cannot pretend to compare intelligibly Canadian red wheat with the red wheat of Toledo, or some other market, if the red wheat of our own country is so indistinctly graded that it may mean red, or something else. In Ontario, in mummy and black-eye peas two new grades have been decided upon. The standard of barley will run lighter.

A FORGOTTEN CRAFT.

THE work of the millwright, as we knew it in our youthful days, is, in many places in England, at least, quite unknown. The old-fashioned millwright was usually a man of sterling worth, well educated in all the details of his trade, and capable of managing intelligently any kind of work that he was called upon to face in a mill, a man of quick resource, and a thorough workman in wood and iron. When his services were required either for alterations or repairs, he approached the job with a thorough knowledge of its details, and after examination was usually ready with a careful and accurate plan of what was required to be done, and a straightforward idea of setting about doing it. His workmen were very much after the type of the master, mostly younger and with less experience, but with the same "handiness" and readiness of resource, and, under the direct personal supervision of their employer, were daily learning the necessity and value of accuracy in the details of their daily work.

Mills built by such men were the pride of the owner and the delight of the operative. These were the days prior to the keen-cutting competition for contracts, and before the time of the "jerry-building" which occasionally finds its way into mills.

The plan and arrangement of the machinery was the joint idea of the millwright and the miller, and every drive and every machine was carefully arranged and accurately erected. Some of the mills built on these lines were fine specimens of millwrights' work; the bright, true-running shafting, noiseless gears, and the woodwork, with the strength and solidity of high-class work, all tended to make the aggregate results satisfactory and pleasing in every way.

With the advent of roller-milling much of the excellent work disappeared. Keen competition for orders, want of care in measuring up the mill, and, in some cases, absolute ignorance in the drawing-office of the details of flour-mill machinery, led to many arrangements that were bad alike in principle and practice. Then the attempt of the foreman erector, with his army of mill joiners to put right the work of the draughtsman, led to much work that was unique and grotesque; and in addition to this the great misfortune was that the miller for whom the work was being done did not himself understand it, nor the best methods of doing it. Consequently many of the earlier roller mills were very unsatisfactory, and gave a world of trouble to their owners. Shafting and pulleys out of line and proportion, drives ill-conceived and badly carried out, elevators that would not carry or deliver, spouts that would not run, were some of the causes that rendered the life of the miller not a happy one.

During the last ten years, however, there has been considerable improvement, and as the millwright seems likely to again take his legitimate place, we may hope to see a return to the excellent standard of work that prevailed in the mills of our fathers.

After all, the general plan, the arrangement and erection of a mill have a great deal to do with the profit made by it, often much more than the owner thinks or will allow himself to think. We have been in mills within a few years, where the absence of the millwright and the presence of the drawing-office assistant and the mill joiner was broadly written on every floor. Badly hung shafting, hot bearings, belts light as fiddle-strings and running against guides, with liberal use of resin or belt paste, do not tend to excellency or economy in working.

The milling engineers are now much more approximating to the millwright than ever before. Some who have taken a high place as builders of modern mills have been millwrights and sons and grandsons of millwrights; have always been famous for the excellence of their work, and have more than upheld their name and reputation in the later field of roller-mill erection. A miller of large experience recently said to us, when speaking on this subject, "Give me good machines and a well-planned and erected mill, and if the diagram is not quite right it can be easily altered; but unskillful planning and workmanship in erection are always present and always making themselves felt.

This is quite true, and the short life of some mills and the necessity for remodeling so soon after starting, was no doubt due to the courses we have set forth. However, we are apparently on the eve of better times, when the miller will be his own expert and the millwright be responsible for the machinery only.—Milling, Liverpool.

$1,000 CASH BUYS IT.

THIS piece of sarcasm is to be credited to Mill and Power: Substantial building 40 x 50, 1½ stories high, basswood frame, selected elm siding and good oak-slab roof, three run of five-foot Blue Licking stones, flutter-wheel to each run, undershot wheel drives machinery, consisting of one rolling screen, one Grimes' smutter, and bolting equipment equal to any, viz.: two 42-inch reels 20 feet long clothed with 10 ft. No. 8, 5 ft. No. 9 and 5 ft. No. 10, imported silk, placed in knock-down chests where the flour can be mixed to suit each customer, also all tools and implements used in the mill. Block and tackle for taking up the stones, facing hammer for dressing them, and one set of balance scales with 56-pound iron weight, etc.

The dam is three foot six inches high, measuring from a boulder or nigger-head marked "D" lying in the outlet of water from the mill. The dam can be raised three inches higher by grinding free all wheat and feed grists for two farmers, Sticktite and Stubborn, living one on either side of the creek above the pond.

The mill is built at one side and partly on the dam which is made of gravel and brush—inexhaustible materials, always at hand, so the miller can make necessary repairs while the mill runs, no outside help required. Four acres of land (which spread out level will make ten) goes with the mill, including a good big dwelling 10 x 40 feet, four pig pens made from hard water elm, an excavation in the bluff for chickens, and other improvements.

I cannot supply the demand for the mill's product. It is a splendid opening for a man of generous impulses and unlimited capital in a community where creditors are never dunned for settlement.

The people are unanimously in favor of a "miller's trust." Some until after harvest, others to the end of time. Book accounts to the amount of $1,235.50 go with the mill. My price is the book accounts. Terms, $1,000 cash, balance when collected. Good sucker fishing in the spring, at which time I always salt down a year's supply, but as I am getting too old to wade, and suffer heavy penalties in rheumatism, therefore I am obliged, after running it thirty years, to sacrifice this valuable mill, home, society and brain diet, for the paltry sum named. Address,

WORN OUT MILLER,
Sucker Creek, Debtor's Utopia.

DON'T.

ONE of the most common, and at the same time greatest abuses of the boiler, is the reckless practice of blowing out the boiler as soon as the fires are hauled, and the boiler still hot. Under such circumstances the contraction of the fire-sheet, tube-sheet and tubes is so unequal and rapid that in the end it results in the ruin of the boiler.

THE NEWS.

CANADA.

—Winnipeg, Man., is adding $1,884,000 worth of building to the city this year.

—The new mill of the Peterborough Milling Company is about ready for operation.

—The Brandon (Man.) Farmers' Elevator, Mining and Trading Co., Limited, has been incorporated.

—Dow & Curry's new oatmeal mill, at Pilot Mound, Man., is expected to be ready for operation this month.

—W. H. Whinster, of Strathclair, Man., is another loser from fire, his grist mill being consumed three weeks ago.

—Patrons of Industry in Manitoba purpose to handle grain for their members, and have opened an office in Winnipeg.

—Henry Oliver, an oiler at the Columbia Flouring mill, Enderby, B.C., lost his life by being accidentally drawn into the machinery.

—The council of Hamista, Man., has offered Mr. Walker, of Niagara, Ont., a bonus of $5,000, if he will erect a flour mill in that town.

—Govenlock's elevator and engine house at Griswold, Man., have been destroyed by fire. The elevator contained 25,000 bushels of new wheat.

—M. Creighton's roller mill, at Comber, Ont., was reduced to ashes a fortnight ago. Cause of fire unknown. Loss, $12,000; insurance, $6,000.

—Baxter's large grain warehouse at Burlington, Ont., was destroyed by fire in September, together with 15,000 bushels of grain. Loss, $25,000; partly insured.

—Chas. Braithwaite, Grand President of the Patrons of Industry, has taken offices in the Grain Exchange building, Winnipeg, Man., and will handle grain this season for the members of this order.

—The McKay Milling Company's grist mill at the Chaudiere, which had been closed down for repairs is again running, and night and day hands will be run until sufficient stock is laid up.

—Stephen Nairn, the well-known oatmeal miller, of Winnipeg, Man., says the best oats grown this season were to be found in the Red River Valley. Mr. Nairn has received at his mill about 10,000 bushels.

—The Bank of Montreal has issued a writ against the estate of the late F. W. Gibbs, of New York, for $18,322.10 on a promissory note. Mr. Gibbs, it will be remembered, died about a month ago. He formerly resided in Toronto.

—W. F. Stewart has purchased the National Roller Mill, in Brussels, Ont., and has set to work to make necessary improvements about it and the dam. It is said that Mr. R. Graham is associated with him in the enterprise.

—Some years ago, Menno Shantz, miller, at Berlin, Ont., failed and went out of business without settling with his creditors. In March last he purchased a men's furnishing stock in the name of his wife, Lydia. He has now assigned.

—The Great Western Mill, owned by Thos. McDonald, Woodstock, Ont., and which was destroyed by fire in August last has been rebuilt. The machinery is of the most modern type and the capacity 300 barrels of oatmeal and split peas per day.

—The Montreal Transportation Company is building a large barge at Kingston, Ont,, with a capacity of 55,000 bushels of grain. The company will give employment to two hundred workmen during the winter. The barges have been so busy this season that repairs have been out of the question, and these will be prosecuted in the winter.

—Archibald Campbell, M.P., West Toronto Junction, Ont., has notified the Mayor that the agreement entered into last November with the town for the erection of a flour mill, elevator, and cooper shop has been fulfilled, and everything is in first-class running order. The mill turns out over 300 barrels daily.

—A Montreal dispatch says: It is understood that a new grain elevator company is in process of formation here and that the scheme has the promised support of several of the steamship companies, the Canadian Pacific and the Grand Trunk railways. The capital of the new company will be $100,000, and it is expected to start operations next spring.

—The roller grist mill, owned by J. W. Cochrane, Crystal City, Man., has been sold to Hon. Thos. Greenway, who has rented it to Graves, Campbell & Co. Mr. Cochrane is building a mill at Glenboro. Graves, Campbell & Co. have also taken possession of the elevator formerly owned by the Farmers' League, and have commenced buying grain.

—Head & Bossons, elevator builders, of Portage la Prairie, Man., have ten elevators contracted for this season; six are completed. They are at Kemnay, 40,000 bushels capacity; Carnduff, 30,000; Bagot, 20,000; Baldur, 30,000; Cypress River, 30,000; and Indian Head, 30,000. The uncompleted ones are at Sintiluta, 30,000; Lumsden, 20,000; Oakville, 20,000; and Belmont, 30,000; and these will be completed almost right away.

—A Winnipeg dispatch says: The shipment of new wheat received so far by the Canadian Pacific Railway is the largest in the history of the company at this season of the year. These receipts represent principally deliveries from farmers, the wheat in store at Fort William up to the 23rd September amounting to 472,700 bushels; receipts, 178,589 bushels; shipments, 356,702 bushels. The receipts at the Canadian Pacific Railway elevators from now on will equal the shipments.

—The annual meeting of the Lake of the Woods Milling Company, limited, was held at the office of the company in the Board of Trade building, Montreal, on the 4th inst. The report for the year ending August 31st, which was submitted to the shareholders, was considered satisfactory, and a dividend of 6 per cent. on the capital stock of the company was declared payable on the 1st of November. The following directors were elected: Robert Meighen, John Mather, R. B. Angus, John Turnbull and W. A. Hastings. At a subsequent meeting of the directors, Robert Meighen was elected president and managing director; John Mather, vice-president; W. A. Hastings, general manager; G. V. Hastings, general superintendent, and S. A. McGaw, manager at Winnipeg.

—The erection of the proposed C.P.R. elevator, which was to have been built at Winnipeg, Man., this fall, has been postponed until next year. This action was decided on after it became apparent that the elevator would not be needed to assist in handling this year's crop. It is estimated that fully 85 per cent. of the crop will grade No. 1 and 2, and the balance No. 3 and 4, there being practically none of the poorer grades, consequently there will be no need of a cleaning and sorting elevator for which the one to have been built was intended. Again, it is confidently expected that a goodly proportion of the crop can be shipped out before navigation closes and the storage facilities at Fort William will be ample to accommodate the remainder quite easily, and the Winnipeg elevator would not be required for storing purposes.

GENERAL.

—Ten carloads of human bones were recently shipped from Mexico to the United States. They are to be used for fertilizing and sugar-refining purposes.

—Russia has millions of fertile acres that have not been touched by the plow; improved agricultural methods and machinery are being introduced; the grain trade is being placed on a business basis; flour-mills of large capacity and modern type are being erected. Lastly, it is said, a change is to be made by the Czar in the land system, which will substitute individual effort for the primitive communal system. Clearly, Russia is to be our rival.

—According to the Austro-Hungarian Consul at Milan, Italy has more flour mills than can find work; many mills, it is stated, are shut down. Although the high duty on foreign flour (amounting in all to 13.97 lire, or about 11s.) prevents anything like free importations, a certain amount of foreign flour finds its way into the peninsula. The imports in 1891 amounted to 38,910 quintals (the quintal is 220.46 lbs.), against 41,312 quintals in 1890, the respective shares of Austro-Hungary amounting to 18,734 quintals in the latter, and to 18,886 quintals in the former year. The same report adds that of foreign flours Russian and Hungarian divide the honors in the north of Italy, while Russian flour shares the ground with the native product in the south.

PERSONAL.

Mr. J. C. Wilson, of the Glenora Mills, Picton, Ont., has been confined to his home through illness.

Mr. Harry J. Stevens, manager of the Aylmer (Ont.) roller mills, was married on September 27th, at the Church of Christ, Dorchester, to Miss Ethel Stripp, of Kingsmill. The ceremony was performed by Rev. T. B. Knowles, of St. Thomas, assisted by Rev. E. R. Black. The happy man of this happy occasion is a son of Mr. N. H. Stevens, the big miller of Chatham, and one of her most esteemed citizens.

TERRESTRIAL GRAVITY.

THE mean density of the earth has been studied by a French physicist, M. Berget, by means of a new instrument—the gravimeter of M. Mascart. This apparatus consists of a U-shaped glass tube, containing a column of mercury balanced against a small quantity of hydrogen gas in such a way that slightly varying effects of gravitation will cause the mercury to move in the tube, as in the thermometer or barometer. By this delicate device M. Mascart believes he has obtained some evidence of a variation in the gravity of the earth. M. Berget made his computations of the mean density from the difference in effect upon the apparatus of the earth's attraction with the attraction of a lake and when the lake had been emptied of its 320,000 tons of water. A number of trials have led the experimenter to place the mean density of the earth at 5.4, the estimate of M. Cornu, by the method of Cavendish, being 5.5.

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ESTABLISHED - 1885

32 Church Street, Toronto

The President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said: I have much pleasure in drawing your attention to the fact that this company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

Up to the present time the insurers with this company have made a saving, when compared with the current exacted rates, of $91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to $21,522.72.

Besides achieving such result, we now also have, over all liabilities—including a re-insurance reserved (based on the Government standard of 50 per cent.—(50%), a cash surplus of 1.93 per cent. to the amount of risk in force.

Such results emphasize more strongly than any words I could add the very gratifying position this company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report.

The report was adopted, and the retiring Directors unanimously re-elected. The Board of Directors is now constituted as follows: James Goldie, Guelph, president; W. H. Howland, Toronto, vice-president; H. N. Baird, Toronto; Wm. Bell, Guelph; Hugh McCulloch, Galt; S. Neelon, St. Catharines; George Pattinson, Preston; W. H. Story, Acton; J. L. Spink, Toronto; A. Watts, Brantford; W. Wilson, Toronto.

HUGH SCOTT, Mgr. and Sec'y. THOS. WALMSLEY, Treasurer.

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If you want to save fuel . . . .
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A good pipe covering is one of your best investments. It is false economy to have uncovered pipes, as you are just paying the coal man what the covering man should have, and only ashes to shew for it. Give the matter your consideration, it means money to you.

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Write for sample copy.

THE CANADIAN MILLER,
Toronto, Ont.

—USE—

MYERS' ROYAL CATTLE SPICE

TESTIMONIAL.

DEPARTMENT OF AGRICULTURE,
ONTARIO,
Toronto, March 17th, 1893.

Gentlemen,—We have used Myers' Royal Cattle Spice during the present winter with both cattle and sheep. It seems to be equally valuable for both. I noticed especially the benefit on a lot of yearling rams. The change in their appetite and appearance was easily perceived after the first week or ten days' feeding, and they have steadily and rapidly gained since.—Yours very truly, (Signed) JOHN DRYDEN.

Messrs. Myers & Co., Toronto.

JAMES DICKSON

FINANCIAL AGENT
ASSIGNEE
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ETC.

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WISH THUS TO BUILD an advertisement in the CONTRACT-RECORD, TORONTO will bring you tenders from the best contractors.

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YOU'LL LIKE IT

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OPPOSITE ROSSIN HOUSE
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ESTABLISHED 1871

DUST! DUST!

Gibbs' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust. Invaluable to operators in every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel plated protector by mail, $1.00; postage 5c. Circulars free. Agents wanted.

Gibbs' Respirator Co., 36 LaSalle St., Chicago.

BRANDS:

STAR : LINCOLN
CROWN
RED CROSS
CLYDE MILLS
SPARKLING RIVER

Unsurpassed for Uniform Quality

GREENFIELD MILLS + AYR. ONT.

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Daily Capacity 500 Barrels

JORDAN CHAMBERS
W. J. Kramer,
DESIGNER & ENGRAVER ON WOOD
TORONTO ONT

3½ Cents a day—

That isn't much money, is it?

About twenty-five cents a week or so.

And a man must be pretty hard up if he hasn't that much to spend every week.

Times are hard, they say; but if they are hard now to your family and yourself, what will they be to your family without you?

That's worth thinking about.

We think that no man should be without life insurance when it can be had at such a low rate as 3½ cents a day from the Manufacturers' Life, Yonge Street, corner Colborne, Toronto.

Write to us and we will give you all particulars.

ROBIN & SADLER
MANUFACTURERS OF
Leather Belting
SPECIALTIES!
DYNAMO BELTS
WATERPROOF BELTING
MONTREAL TORONTO
2518 & 2520 NOTRE DAME ST. 129 BAY ST.
Send for sample of our new SAWMILL BELT

FIRST PRIZE, DIPLOMA AND GOLD MEDAL, EXHIBITION, JAMAICA : : : :

Royal Mills, capacity 1,800 bb
City Mills, 1,100 bbls.
Glenora Mills, 1,200 bbls.
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DAILY CAPACITY
7,100 BBLS.

HIGHEST QUALITY

Hungarian Patents
AND
Strong Bakers'
FLOUR

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HEAD OFFICE:
MONTREAL, QUE.

DID YOU KNOW IT?

MESSRS. DOMINION DRY KILN CO.,
TORONTO, ONT.

GENTLEMEN,

We have thoroughly tested the "Andrews" Lumber Dry Kiln furnished by you and must say that it more than surpasses our expectations. We put green spruce lumber in from the saw dripping with water and in 18 hours it was drier than lumber that had been stuck up in the yard all summer, and in four days it was as dry as a bone, and without nearly as many checks or warps as the same grade air dried.

A very important feature of the "Andrews" Kiln is that it saves so much steam over that of any other system.

You may refer any one you like to us, or send them down to inspect, and we can satisfy them that your kiln cannot be beat.

Yours truly,
EASTMAN LUMBER CO.

WHAT?

WHY

CHATHAM, ONT.,
August 25th, 1893.

A. G, MORTIMER, ESQ..
Manager Dominion Dry Kiln Co.,
Toronto, Ont.

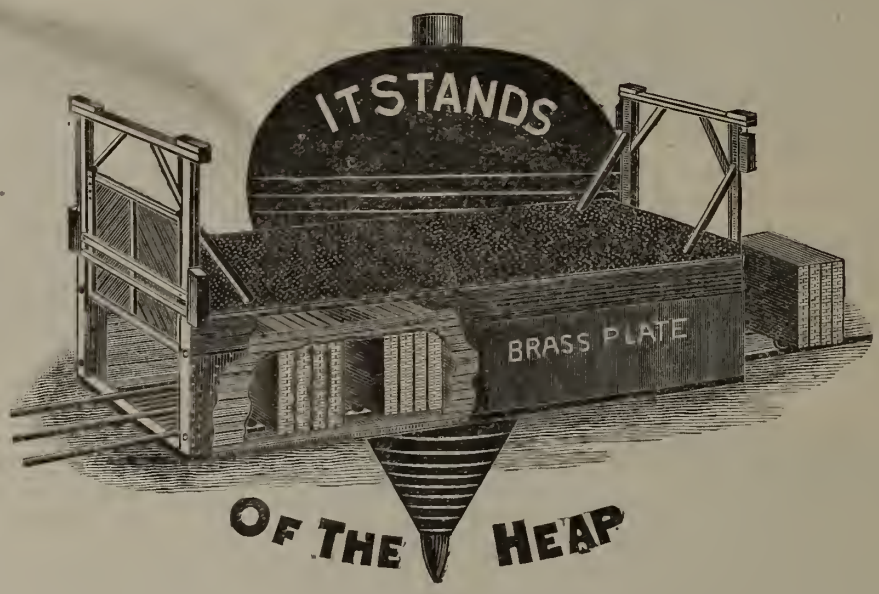
DEAR SIR,

The "Andrews" dry kiln, which I purchased from you has now been in operation over a month, and is so perfectly satisfactory that I cannot say enough in its favor.

I use very little steam and my staves come out as dry as a bone, and are not in any way injured by warping or discoloration.

Yours truly,
(Signed) N. H. STEVENS

AWARDED
THE
GOLD
MEDAL



AT THE
WORLD'S
FAIR
CHICAGO

SAVES
Time
Capital
Interest
Insurance
Yard Room
Freight
Material
Labor
Expense

Nearly 500 Kilns
- already -
in Successful Operation

THE ANDREWS DRYER

FOR

Lumber, Shingles, Heading and Staves

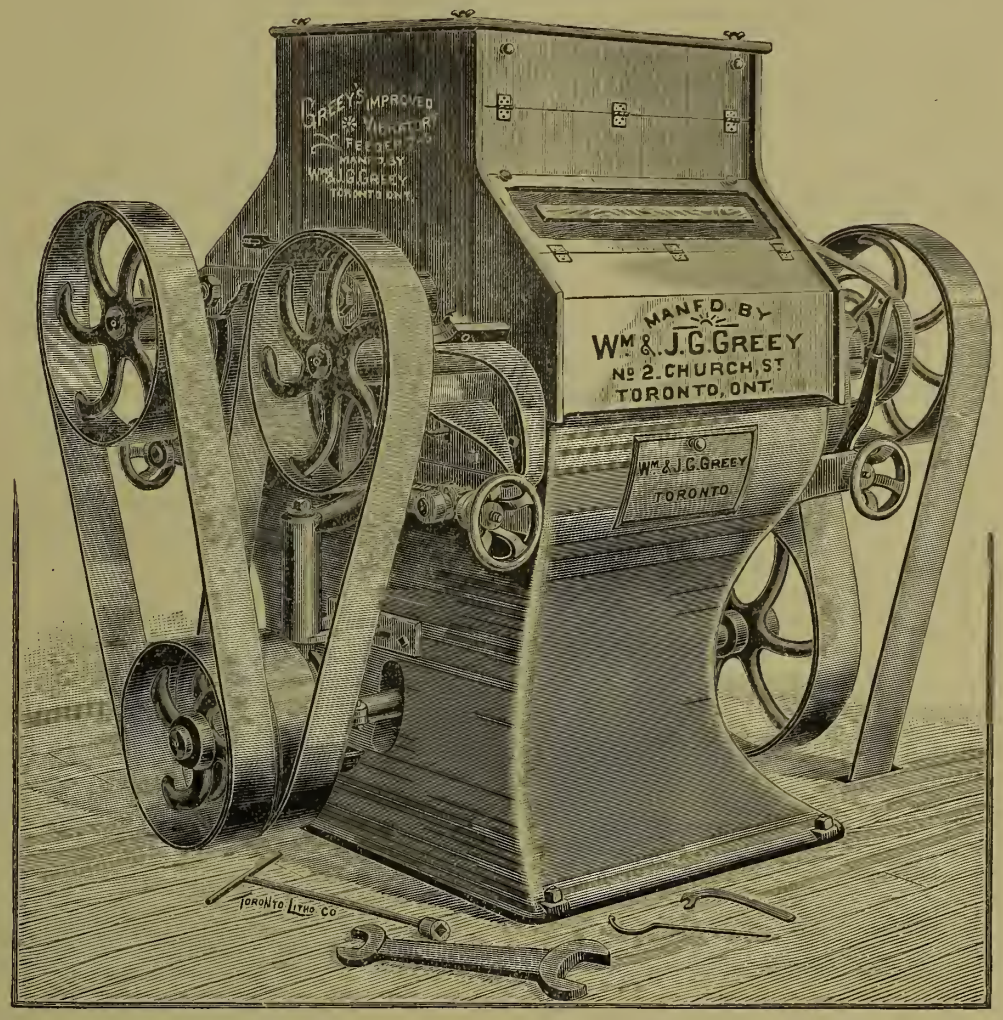
MANUFACTURED BY

THE DOMINION DRY KILN CO.

TORONTO, ONT.

The Best is Cheapest in the End

Are always in better working condition
Produce better results
Don't have to be corrugated and ground so often



Mill don't have to shut down for repairs
Makes more money
Considerable saving in expense

GREEY ROLLS

ARE SO HARD AND TOUGH

LAST TWICE AS LONG AS OTHERS

..... Guaranteed to be absolutely free from any flaw .....

GREEY ROLLS ARE THE BEST

Old Rolls ground and corrugated with the utmost precision

Warranted perfectly true, and returned promptly

OUR ROLL GRINDING AND CORRUGATING PLANT is the largest, best equipped and most accurate in the country; our stock of Corrugating Tools the most varied. New Corrugating Tools of any style made to order with the greatest nicety.

MANUFACTURED BY

WM. & J. G. GREEY

2 CHURCH ST.
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DICK, RIDOUT & CO.

JUTE AND COTTON

BAGS AND SACKS

OF EVERY QUALITY AND SIZE REQUIRED.

Strict attention given to prompt shipment.

Original Designs for Brands Prepared Free . . . Printing in beautiful Bright Colors at Lowest Prices

SEND FOR SAMPLES AND PRICE LIST

DICK, RIDOUT & CO., TORONTO, ONT.

Actual Results

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ONTARIO MUTUAL LIFE

on an ordinary Life Policy of $1,000, No. 1230 during its first 20 years, issued for age 37 :

In 1872....	Paid	$26.57	In 1882....	Paid	$13.29
1873....	"	26.57	1883....	"	12.33
1874....	"	26.57	1884....	"	11 69
1875....	"	24.71	1885....	"	11.35
1876....	"	20.65	1886....	"	11.35
1877....	"	19.16	1887....	"	12.19
1878....	"	17.32	1888....	"	12.88
1879....	"	13.02	1889....	"	12.41
1880....	"	12.65	1890....	"	11.91
1881....	"	13.29	1891....	"	11.38

Total Paid in 20 years....$321.29

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WRITE FOR DISCOUNTS

Toronto

1892 MODEL

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Unapproached for Excellence of Design and Construction, Quality of Work, Simplicity and Durability.

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BAGS For FLOUR OATS BRAN FEED

Every Size and Quality in stock
The Largest and Best Equipped Bag Factory in Canada

BAG PRINTING IN COLORS

A SPECIALTY

. . . DESIGNS FURNISHED FREE . . .

and the Best Work guaranteed

PRINTING CAPACITY 15,000 BAGS DAILY

HESSIANS or BURLAPS

We carry the Largest and Best Assorted Stock in the Dominion.

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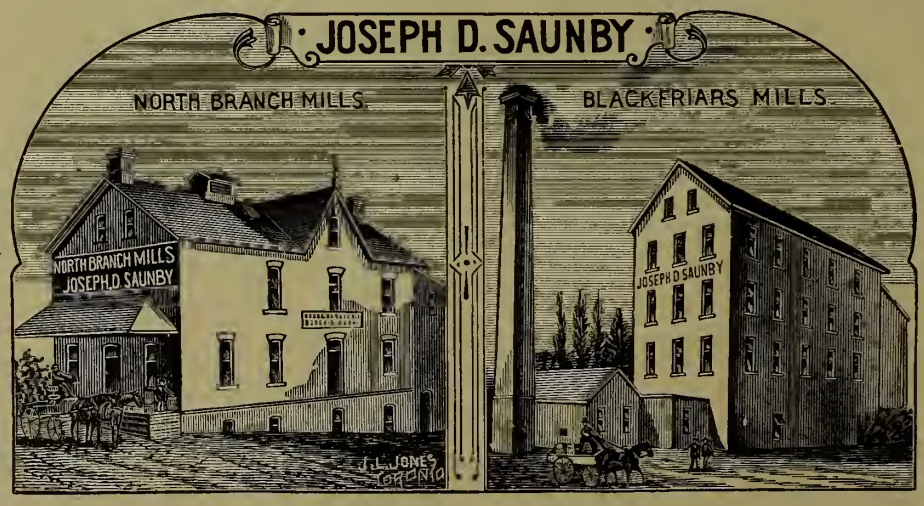
NEW & 2ND MACHINERY
ILLUSTRATED CATALOGUE FREE
H. W. PETRIE
TORONTO, CANADA

JOSEPH D. SAUNBY



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Manufacturer of . . . .

. High Grade Flours

Brands :

"ANSONIA"

AND

"TECUMSEH"

Chopped Feed . . .

In whole or car lots mixed

THE CANADIAN MILLER AND GRAIN TRADE REVIEW

NEW SERIES "MECHANICAL AND MILLING NEWS"

OLD SERIES, VOL. XI. } NUMBER 11.
NEW SERIES, VOL. III. }

TORONTO, ONT., NOVEMBER, 1893

{ TERMS, $1.00 PER YEAR
{ SINGLE COPIES, 10 CENTS

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IN USE BY

EIGHT LEADING GOVERNMENTS

BEST ANTI-FRICTION METAL FOR

Flour-mill, High-speed Engine, Dynamo, Rolling-mill, Steamship, Railroad, Saw-mill, Cotton-mill, Paper-mill, Woolen-mill, Silk-mill, Jute-mill, Rubber-mill, Sugar-mill, and all Machinery Bearings.

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Automatic Arc Dynamos and Lamps
Direct Current Incandescent Dynamos
Alternating Current Incandescent Dynamos
Transformers of High Efficiency
Electric Motors All Electric Supplies

AN ORDER SOLICITED

Send for new pamphlet of Motors and new Book of Testimonials

OUR record for the past ten years as Electrical Manufacturers guarantees purchasers satisfaction.

Ask our customers about cost of repairs on Ball apparatus, which for

EFFICIENCY, ECONOMY
SIMPLICITY and SAFETY

are unexcelled.

THE BALL ELECTRIC LIGHT CO., LTD.

70 Pearl Street, TORONTO, ONT.

A. WATTS & CO.

BRANT ROLLER MILLS

BRANTFORD, ONT.

GEO. McCULLOCH & CO.

Rapid City Roller Mills

RAPID CITY, MAN.

Hungarian Patents
Strong Bakers'
and Low Grade

SEND FOR SAMPLES AND PRICES

RUBBER BELTING

MONARCH, RED STRIP AND LION BRANDS.

MANUFACTURED BY

THE GUTTA PERCHA & RUBBER MANUFACTURING CO. OF TORONTO.

OFFICE 61 & 63 FRONT ST. W. TORONTO.

WRITE FOR DISCOUNTS.

FACTORIES AT PARKDALE, ONT.

KENT MILLS
CHATHAM, ONT.

AYLMER MILLS
AYLMER, ONT.

"KENT MILLS"
"THAMES"
"ELGIN" } High Grade Flour

"SWEET HOME" Second Grade Flour

"BUDGET" Low Grade Flour

CORNMEAL { Straight Kiln-Dried / Granulated Sunrise, Kiln-Dried

BEANS { Prime Medium / Hand-Picked Medium

Middlings, Bran, Corn, Chopped Feed

SEND FOR SAMPLES AND PRICES

N. H. STEVENS, Chatham, Ont

ESTABLISHED 1856

The J. G. McLaren Belting Co.

MONTREAL

BELTING

MANUFACTURED FROM

IMPORTED OAK-TANNED LEATHER

EVERY BELT GUARANTEED

TORONTO: 76 YORK STREET

THE GOLDIE & McCULLOCH CO., LTD.

High Grade Modern Flour Milling

THE science of milling has of late made very rapid progress, and we invite all who aim at having the best machinery in this line to investigate our system. For general excellence of design, workmanship and material, and for attaining the very best results, we claim that our manufactures in this line are not anywhere surpassed.

New Mills Erected and Old Mills Remodelled
OF EVERY STYLE AND CAPACITY, UNDER THE SUPERVISION OF A THOROUGHLY PRACTICAL MILLWRIGHT AND MILLER.

Bolting Cloth OF SUPERIOR QUALITY, AND
General Mill Furnishings ALWAYS ON HAND
.... ORDERS PROMPTLY FILLED ....

WE ALSO MANUFACTURE

The Wheelock Improved Automatic Engine, which we claim to be unsurpassed.
Boilers and all appliances in connection therewith. Turbine Wheels.
Wood-working Machinery. Sawmill Machinery. Shingle and Stave Machinery.
Wool Machinery. Patent Wood Rim Split Pulleys.
Fire and Burglar Proof Safes, Vault Doors, etc., etc.

CIRCULARS AND FULL PARTICULARS IN EVERY DEPARTMENT FURNISHED ON APPLICATION

GALT, ONT.

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HEAD OFFICE, MASONIC TEMPLE, LONDON, ONT.

Authorized Capital, $500,000

Subscribed Capital, $200,000

Full Government Deposit

Have your Boiler inspected and insured. It pays to know you are right.

Will your Boiler stand the pressure at its weakest point? Can you judge it?

The man who handles steam handles power.

As its danger increases, the knowledge necessary to protect yourself and property against that danger should be greater.

Know that you are right. Inspection is the best investment.

Do you use a high pressure?

Your engineer should be a skilled man.

Determine the power of your Boiler by inspection. Insure its safety by inspection and insurance.

When were your Boilers last inspected by a competent engineer?

Do you know what pressure your Boilers can safely stand?

Is your Steam Gauge registering the correct pressure?

Are your Water Gauges free and in good working order?

Is your Safety Valve working properly?

Do not trust to luck; the unexpected generally happens. Avoid the calamity of an explosion.

Protect life and property by taking out one of our Inspection and Insurance Policies.

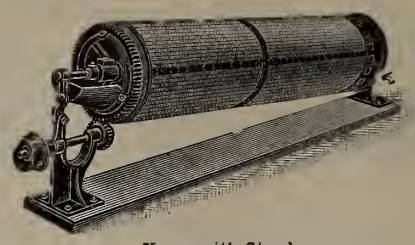
This Company insures Boilers against explosions, and causes inspections to be made by competent engineers. Inspection of your Boiler is the best guarantee of its safety. Our inspectors give advice and instructions wherever necessary to those in charge of boilers, which is of advantage to the owners, and results in greater economy, knowledge and safety.

Economy in fuel, in repairs, and in the length of time a boiler lasts.

Knowledge how a boiler should be managed, and relieving the owner of responsibility.

Safety because, being kept in order the best results are obtained, and if an explosion occurs you have done what you could.

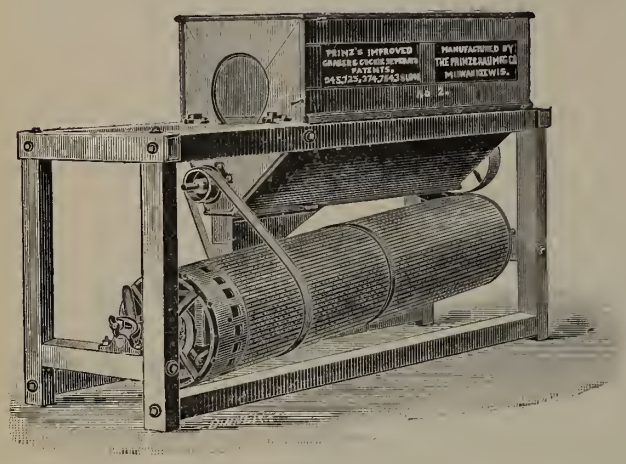
WORLD BEATERS



No. 1 with Stand

THE

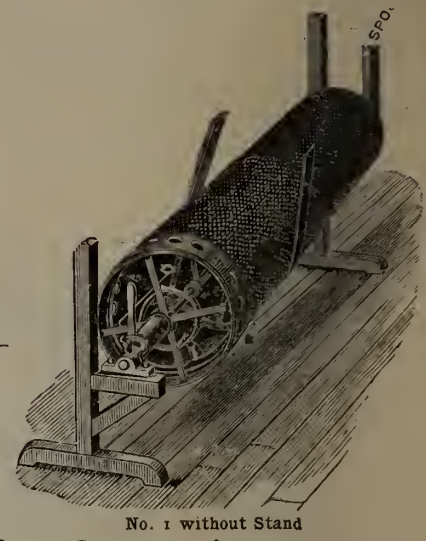
GENUINE PRINZ COCKLE MACHINES



Unique in Principle

Effective in Operation

Unapproachable in Results

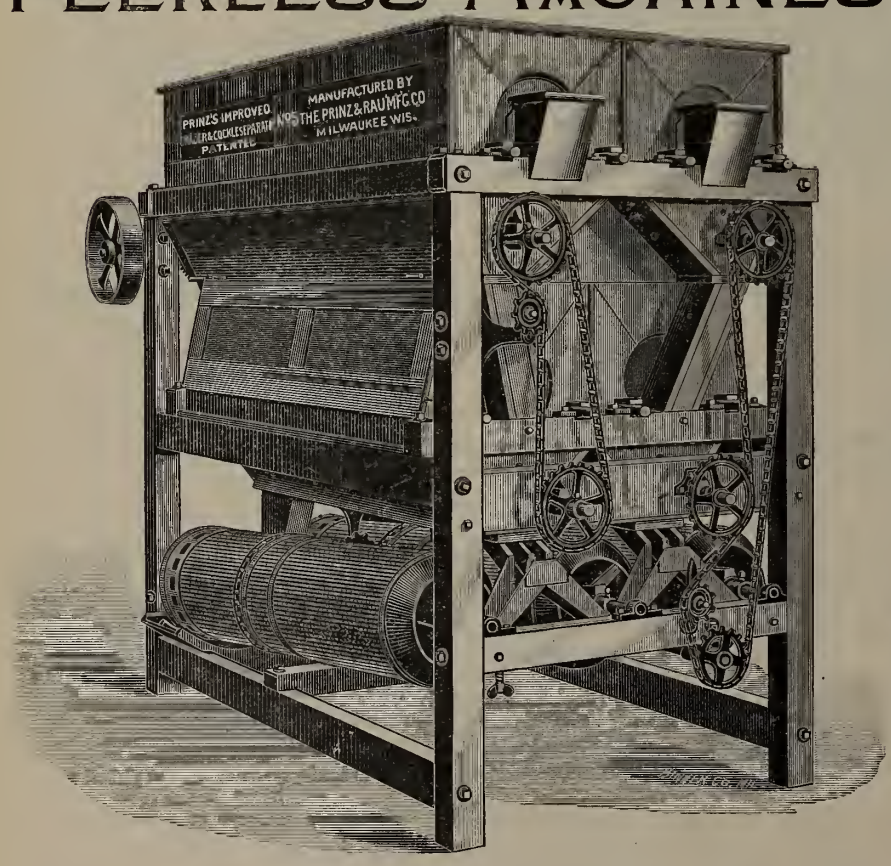


No. 1 without Stand

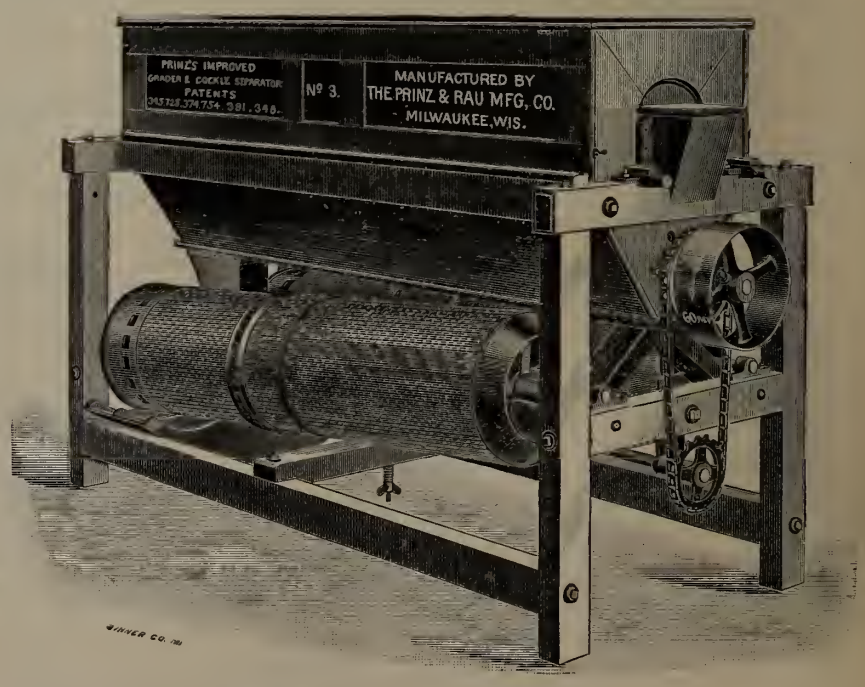
Steel Reels don't wear out. Peculiar Indentation makes Perfect Separation

The Inventor, Mr. Prinz, has studied the secret of grain cleaning, and followed every step with expensive experiments for about 15 years, and the machines now offered are complete in every detail, and guaranteed to do better work than any machine on the market

PEERLESS MACHINES FOR MODERN WANTS



Two-thirds of the mills in Minneapolis, and all the mills in Milwaukee, and about a thousand all over the country, are using the "PRINZ"



Manufactured for Canada trade, under license from Faustin Prinz, solely by

WM. & J. G. GREEY 2 CHURCH ST. TORONTO

THE CANADIAN MILLER

Old Series, Vol. XI. } Number 11.
New Series, Vol. III. }

TORONTO, ONT., NOVEMBER, 1893

{ Terms, $1.00 Per Year
{ Single Copies, 10 Cents

THE HAGGENMACHER BOLTING MACHINE.

A NEW machine called the Plansifter is appearing on the market. This machine is creating such a lively interest among the millers that we feel justified in giving our readers a description of it, which was furnished to us by the sole manufacturer, The Plansifter Company of Canada (Ltd.), Stratford, Ont., who are introducing the machine in Canada.

The inventor of this new bolting machine is Carl Haggenmacher, a prominent and wealthy miller in Budapest, Hungary. He is a man with practical knowledge, well-known in the milling world for many successful inventions in flour milling machinery.

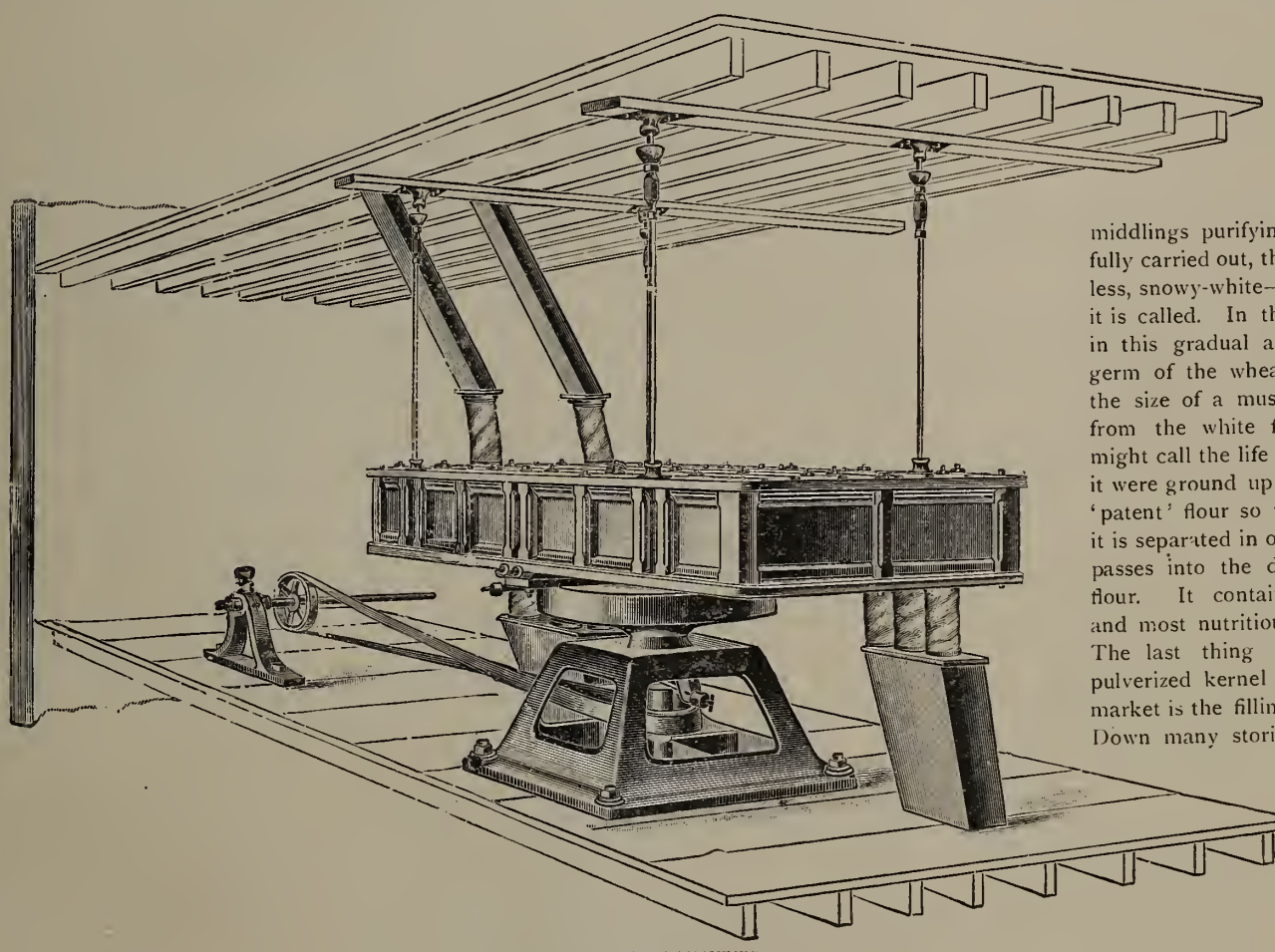
The Plansifter consists of a chest about 11 ft. long, 4 ft. wide and 16 in. high, and contains several frames or sieves arranged on top of each other.

This chest is suspended on four rods; a crank imparts to it, from below, a circular, gyrating motion in such a manner that each point of the chest describes a perfect circle. By an ingenious device the stock in the machine is made to travel over the sieves forward, backward, or in any direction desired. By putting in an appropriate series of sieves the Plansifter scalps, grades the middlings ready for the purifiers, and finishes the flour ready to go to the packer, all in one machine.

The idea of Mr. Haggenmacher was to make a machine having the same action as a hand sieve or riddle. If chop is handled on a hand sieve it will be observed the darker and branny parts of the chop are kept floating on the top, while the heavier parts (that is, the white stock or flour) fall through the meshes of the sieves and bearer. Upon this principle Mr. Haggenmacher claims that the gyrating sieves will make purer flour than any other machine under the same circumstances.

The advantages which the manufacturers claim for this machine, are:—(1) Better work; that is, purer, and at the same time sharper (more gritty) flour than by any other bolting machine. (2) The extraordinary capacity in handling either the best or poorest stock. (3) The cloths are kept perfectly clean without the severe action of brushes, even when the softest material is being handled. (4) The whole machine, notwithstanding its enormous capacity, takes less cloth than one of the old-style reels and occupies little room. (5) It runs smoothly and only requires about 1½ horse-power to drive it. (6) It saves a number of spouts, elevators, conveyers, and diminishes the fire risk.

In view of the fact that over 2,100 Plansifters are in use in Europe and that the Pillsbury-Washburn Flour Milling Company, the Washburn-Crossly Company, and the Humboldt Milling Company, all of Minneapolis, and John B. A. Kern & Sons, in Milwaukee, have secured the right to build enough machines to equip their entire mills, and also that over 270 of these machines have been put in operation in the United States within the last eighteen months, we are of the opinion that it would be to the interest of our Canadian millers to fully investigate this machine before doing any further remodelling in their mills. If the claims made by the manufacturer of this machine proves correct no miller can afford to be without them.



THE PLANSIFTER

HOW FLOUR IS MADE.

THE following description, taken from the St. Nicholas magazine, is designed for child readers, and is freer from inaccuracies than one would perhaps expect from an article so prepared: "The noises on the inside of the mill are deafening. One who has never been in a flouring mill of the largest size cannot realize what a peculiar lot of noises are made by the machinery. As soon as the wheat enters the machine from the long spout which brings it down from the upper floor it falls between two rollers of iron—'chilled' iron they call it, and very hard iron it is, too. One of these rollers revolves rapidly, the other more slowly, in order that the separation of the coat, or bran, from the kernel may be more easily accomplished. The wheat first passes between rollers separated just enough to allow the coat to be crushed. It is then carried away to the top of the mill again, to a room where the sun vainly tries to shine in through the flour-coated windows far above the city's roofs. It next passes over a wire sieve which separates the bran from the kernel proper. This bran, which contains much of the flour material, again passes down and is ground once more, this process being repeated four times, making five grindings, each one finer than the one preceding it. Each time the fibrous or bran portions are more completely separated, and at last the bran comes out a clear, brownish husk with every particle of flour removed. The inside part of the kernel has meanwhile been going through a very interesting process. After the first grinding or breaking, it passes to a big six-sided revolving reel covered with a fine wire netting or sieve. Through this reel the finer portions of the kernels pass, coming out in what are called 'middlings,' a granulated mass which goes back to the rollers for another crushing. This process is repeated through five reels, all but the first being of silk. The last one has 120 threads to the lineal inch. The flour which comes out of the fifth reel, while white in hue, is yet not of the finest 'patent' grade, but is classed as 'bakers'' or second grade flour. The middlings above referred to are purified by an interesting process. They are passed over by a fine wire sieve, through the upper part of which a strong current of air is passed. This holds in suspense the tiny portions of fibrous matter which may have been in the flour, and at last, after this process of middlings purifying has been very carefully carried out, the flour appears a spotless, snowy-white—the 'patent' flour, as it is called. In the process of grinding in this gradual and repeated way, the germ of the wheat, a tiny article, about the size of a mustard seed, is separated from the white flour. It is what one might call the life part of the wheat. If it were ground up it would not leave the 'patent' flour so white and powdery, so it is separated in one of the sievings and passes into the darker or lower grade flour. It contains, however, the best and most nutritious part of the wheat. The last thing that happens to the pulverized kernel before it is ready for market is the filling of barrels or sacks. Down many stories through a smooth tube comes the white or 'patent' flour. Under the tube is the barrel or sack, as the case may be, and as it begins to fill a steel auger, just the size of the barrel, bores down into the flour, packing it carefully and solidly beneath the broad blades."

CURING BOILER INCRUSTATION BY PETROLEUM.

PETROLEUM, which is one of the most useful liquids in commercial use, has appeared in a new role. It is said that it affords the best remedy yet known for boiler incrustation. The petroleum is either squirted against the inside walls of the boiler after the latter has been cleaned, or it is added to the water of the boiler when full, so that when the water is slowly run off, the petroleum acts gradually on the sedimentary deposit, rendering it so loose and brittle that it can easily be removed by tools, or even by a powerful stream of water. So far no prejudicial action of the petroleum on the boiler plates has been noticed. It is said that the State Railways Administration in Prussia has adopted petroleum as an incrustations removing medium throughout the whole of its lines.

THE NEWS.

CANADA.

—M. Creighton will build a new grist mill at Comber, Ont.

—It is said that 200 cars of wheat are daily being received at Fort William.

—Geo. Bull has purchased the interest of Geo. Hutton in the St. Albert, Man., grist mill.

—A wheat train came to grief east of Rat Portage last week, a number of cars being spilled in the smash.

—A large grain warehouse has been erected at Basswood, Man., by Geo. Hanna, and is now ready for use.

—E. A. Duncan has leased the farmers' elevator at Rapid City, Man., from the directors of the Company.

—C. H. Young, grist miller at Codrington, Ont., is in difficulty. His property, which was mortgaged, has been sold.

—Letters patent have been issued incorporating The Brandon Farmers' Elevator, Milling and Trading Company, limited.

—John Mackay, of Bowmanville, Ont., writes that business with him is very good, having a large number of orders ahead.

—Copeland & Sons' mills at Penetang and Midland, Ont., are running day and night, and yet they are behind with orders.

—Smith & Brigham, millers, Moosomin, Assa., have just completed the installation of an electric light plant in their premises.

—The Messrs. Moody, flour millers, of Orangeville, Ont., have purchased a new site and contemplate the erection of a big woolen mill.

—Charles Davies, a farmer living at Whitewood, Assa., this season grew 1,800 bushels of White Fyfe wheat, all of which weighed 69 pounds to the bushel.

The Peterborough Milling Company, we are informed, by one of its directors, don't do a milling business as a company. They merely buy, build, sell and rent.

—Wilson & Co. is the style of a new firm of grain brokers lately established in Winnipeg. John Wilson is a grain buyer of Mark Lane, and the other, S. B. Flower comes from Brandon.

—The movement of grain through the country, says the Manitoba Free Press of a recent issue, notwithstanding the low price of wheat, is on the increase, and the railroads are hauling twelve to sixteen carloads each every day.

—The stock of grain in store at Port Arthur, Ont., on the 28th October last was 1,129,672 bushels. During the following week there was received 587,561 bushels, and shipped 296,778 bushels, which left in store on the 4th November 1,420,455 bushels.

—J. T. Huber, of Berlin, Ont., who lost his glove and shoddy factory lately by fire, has purchased the flouring mill property of Mr. J. Cluthe, Doon, and will at once proceed to fit up the buildings with the necessary machinery, and as soon as completed will again commence business.

—The new flour mill at Melita, Man., erected by Peter Powell and John Ferguson, is nearing completion. The mill building is 36 by 48 feet, four stories high. The engine house is 36 by 24 feet, built of solid stone. The building will be lighted with electricity, and the plant generally is claimed to be a very complete one.

—The farmers' elevator at Neepawa, says the Herald, is having its capacity tested these days. Ennis's is almost full, so is Ogilvie's. There were 35,000 bushels shipped from Neepawa during October. Cars are scarce, and just now it is becoming a serious question among buyers as to where they will store the large amount of grain that is daily coming in.

—John Carruthers, of Carp, Ont., has sold his roller mill to H. McElny & Sons. The whole mill will be overhauled and put into first-class operation and will be kept running day and night, the estimated daily output of flour 75 to 100 barrels. A large elevator will be placed in conjunction with the mill which will be a great convenience to the farmers.

—The Baltimore Corn and Flour Exchange have written to the Montreal Board of Trade asking for their co-operation in endeavoring to correct the present unsatisfactory methods of delivering grain from ships at European continental ports so that consignees would receive their proper proportion of shipments according to the conditions of the bills of landing.

—The Commercial, Winnipeg, Man., says: "The 'Deil' appears to be 'amang' the millers, and they are giving the consumers cheaper flour than they ever had before. The recent cuts in prices have brought the local value of flour down to about a parity with prices of Manitoba flour east, and flour is comparatively cheaper in this market than ever before."

—Winnipeg is to have a new flour making industry. The projector is a Mr. Geo. Rice, who has been a resident of the Prairie City for fourteen years. He has about completed a mill for crushing grain for feed and making the flour familiarly known as Graham flour. This flour he will make by taking No. 1 hard wheat, cleaning and grinding it just as it is, without taknig anything from it or adding anything to it, and it will be known as Rice's process flour.

—Canadian millers carried off some of the best awards made at the World's Fair. Among these were: Stephen Nairn, Winnipeg, Man.; N. H. Stevens, Chatham, Ont.; Whitlaw, Baird & Co., Paris, Ont.; John Steirsmiller, Walkerton, Ont.; D. McClean, Calgary, N.W.T.; Moose Mountain Trading Co., Cannington Manor, Assa.; J. Wilson, Fergus, Ont.; E. O. Tilson, Tilsonburgh, Ont.; Western Milling Co., Regina, N.W.T.; Austin Mills, Austin, Man.; M. McLaughlin & Co., Toronto, Ont., John Hull, Lakefield, Ont.; Brackman & Ker, Victoria, B.C.

—The Ogilvie Milling Co., Winnipeg, has issued a handsome folder circular, giving a list of testimonials from bakers who have used the manufactures of the company. The front page of the circular is a handsome piece of printing in color work. It gives cuts of the Winnipeg and Royal Mills owned by the company. Cuts are also given of bags of Ogilvie's oaten and bakers brands of flour, showing the trade mark of these brands. The testimonials speak very highly of Ogilvie's flours, particularly of the quality turned out since the improvements were made in the Winnipeg mill.

PERSONAL.

T. R. Wadsworth, the well-known miller of Weston, and director of the Imperial Bank, died suddenly on Monday 30th October, of apoplexy. He was superintending the erection of a new milldam, and at 3.30 o'clock went into the mill. He told the miller to come over to the store for some shipping orders. The miller went over five minutes later and found Mr. Wadsworth dead in the office. He had a newspaper in his hand. Mrs. Wadsworth was in Toronto meeting her son when Mr. Wadsworth's death occurred. He was a wealthy man and respected by a wide circle of business and financial men throughout the Dominion. He was born in Weston more than three score years ago and had lived all his life there. He succeeded in building up a large and prosperous flour milling business and became prominent in the management of several financial institutions. He occupied a place on the directorate of the Imperial Bank continuously since the organization of the bank in 1875. He attended the last board meeting on the Thursday previous to his death, and among those who most sincerely mourn his death are his fellow-directors, who valued highly his careful, prudent counsels and accord to him a full share of the success which has attended the Imperial during the twenty years of its history. He was also a director of the London & Canadian Loan and President of the Real Estate Loan Company of Toronto. He was very highly respected by all who knew him for the honorable, straightforward character and for the soundness of his judgment. He was of a retiring disposition and did not seek prominence in public affairs, and the Reeveship of his township is the only public office which he ever occupied.

AUSTRIAN OPERATIVE MILLERS.

AT a recent meeting of Austrian operative millers, says The Miller, of London, Eng., a gloomy picture was drawn of the condition of labor in flour mills. One speaker maintained that even in some great merchant mills men were worked for 18 hours at a wage of 80 kreuzers (roughly 1s. 4d.). As for small country mills, there the worker was alleged to find no bowels of compassion. He might now and again snatch an hour's sleep, but any moment was liable to be roused by the bell which hung over his pallet, and was so arranged as to ring whenever the millstones with which its cord communicated should be running empty. In such mills the men were locked in for the night, and could hardly get away if a fire broke out.

Minor but substantial grievances were advanced in the shape of sleeping quarters reeking with damp, and choked in flour and dust. It was stated that in few country mills could an operative be found of more than thirty years of age. By that time the worker would be bowed and pigeon-breasted (a result of constantly carrying too heavy weights) and unfit for the hard work of a small flour mill.

Another speaker said that even in merchant mills of fair capacity regular hours were the exception, and that the blessing of a twelve-hours' shift could only be enjoyed in a few large mills. There, however, the wages were very low on account of the young and unskilled men it was possible to employ. Several resolutions were passed before the meeting broke up. The general effect of which was to affirm the expediency of placing all flour mills without distinction under the operation of the Austrian factory law, which, if we are not mistaken, limits a shift to 12 hours. A protest was also raised against the indenture of apprentices before the age of sixteen.

BAD FOR HOLDERS OF WHEAT.

THE past two years have not been very profitable to many holders of wheat. Added to the various stories of the kind that have been made public of recent months comes the following from the Montreal Trade Bulletin: "Now we will refer to a lot of Canada spring wheat that missed a sale, and it is a lucky thing for the owner that it was only a single car. This lot of only 400 bushels has been held in this city since last July twelve-month, costing 75c. in the country, or about 80c. laid down here. About a year ago it could have been sold at 75c. in store here, but the owner was indignant at such a bid. It is only a few days since, however, that he came into the city to accept a bid of 60c. but it was too late; he put off the acceptance of that bid too long, and the buyer refused to take the wheat, as it had been discovered that it was slightly heated. As it was only a car load, the owner, of course, did not make much ado about it, although he sat down and figured up a loss of a little over $200 on that single car. He calculated that the storage, interest and insurance on the car of wheat amounted to about 20c. per bushel."

THE BARLEY TRADE.

THE McKinley Bill, which went into force three years ago, has greatly lessened the growth of Canadian barley. Canada's largest export of barley a few years ago was in round numbers 12,000,000 bushels, but this was reduced to 4,000,000 in 1892-93. The production in this province in former years was from fifteen to twenty million bushels, but good authorities state that five millions is a good allowance for the past season and others say that three millions is good count. The barley this year is bright, but it lacks body, and consequently there is little prospect of doing an export trade with Britain. No shipments there are reported this year. As compared with British barley ours is much smaller and lighter in weight. The stock in store is only 28,700 bushels, as against 40,735 bushels a year ago and from 100,000 to 300,000 bushels in years gone by.

SHE WALKED OFF WITH TWO BARRELS OF FLOUR.

"WHEN you talk about strong men I can tell you a story," said a truckman. "It was before I was in the jobbing business that there lived in Lewiston a woman who could beat all the strong men from Samson to Cyr. She was in the old grocery store on the corner one day when the proprietor pointed to a couple of flour barrels, saying: "Mary, if you'll carry them home I'll give them to you." Sanborn, who was a truckman thirty years, and who sold out to James Cole, was there, and offered to bet that she couldn't carry one. "Put them up on the counter,' she said, 'and I'll take them both.' Four men lifted the barrels up and she went up to them full of confiidence, and resting the bottom of one on her right hip circled the barrel with one of her long arms and then swung around so as to grasp the other in the same way, and, as I live, she carried them out and along the street to a place 300 yards down the road, where one of them fell and upset her balance. You see, she rested them on her hips and didn't try to lift them by her back. The grocer gave her the flour."

No mill can have a fixed running capacity which has different grades of wheat to grind. The necessi y of a fixed capacity in any mill is a fixed grade of wheat—an exact quality. The treatment for hard, dry wheat, and that necessary for soft, tough wheat are radically different.

Advertise in CANADIAN MILLER. It pays.

THE saying is an old one, "that every mother crow thinks her own juvenile crow the blackest." It is human nature, and the mother crow is not always astray. Why should not the miller, who has given years of thought and experience to the construction of a mill, believe he has got the best mill the country can produce? Evidently this is the way Mr. H. A. Mulhern, of Peterboro', feels, and he is a man who knows a good deal about milling. I give you the words of a recent letter: "The machinery in our new mill has been running for some days and we start to grind to-morrow. We consider we have the most complete 600-barrel mill in the Dominion, and if anyone thinks otherwise we should be pleased to have him come and satisfy himself. The water wheels will give us 400 horse-power. All we have to do to increase to 800 barrels is to put in four more double sets of rolls. We have all other machinery in to handle the increase."

* * * *

Russian war days, and gala days these were for farmer and grain merchant, are recalled by the following incident: "E. M. Morphy, the veteran Yonge Street jeweller, was at the Woodbridge fair a few weeks ago, and while sauntering around the grounds was approached by an elderly farmer, who greeted him by name. "Really you have the advantage of me," said Mr. Morphy. "Why, Mr. Morphy, I bought this watch from you at the time of the Russian war," said the farmer, pulling out an ancient timepiece, "and in all the years since then it has not cost me a dollar for repairs." "Aye, aye," said Mr. Morphy, "you could well afford to buy a good watch then, for you were getting two dollars a bushel for wheat."

* * * *

A well-to-do business man met an old acquaintance in his trade who had a decidedly shabby and forlorn look. "Well, well! If this isn't Jones!" exclaimed the prosperous man. "I haven't seen you on 'Change for a long time." "I haven't been there," answered the shabby man. "Ah, retired from business?" "Not exactly: on the contrary, business has retired from me!" This is what someone has called the other way around. Circumstances over which one has no control will sometimes bring misfortune on the best and strongest of men. Business, however, retires from some men because they tire of looking properly after it. I am impressed in my association with the business community with the danger that lurks among some of the shrewdest men of getting into ruts and sticking there, allowing others who are more energetic to pass them in the race. Eternal vigilance is the price of success in business in all of its departments.

* * * *

"A very good business is being done in broken lots of Manitoba flours," said a well-known Toronto dealer. "These flours are preferred to Ontario brands," he continued, "as there is much more body in them. For instance, bakers can get from 66 to 67 loaves out of a barrel of Manitoba flour, while 60 is a large number from a barrel of Ontario wheat flour. In speaking of flour," the dealer said, "the price of bread is uppermost. Bakers must be making good profits just now in selling the four-pound loaf at 10 to 12 cents. Choice Manitoba patents sell at $3.80 to $3.90 per barrel, and counting 66 loaves to the barrel which sell, say at the lowest price, 10 cents, the gross revenue from a barrel would be $6.60. The cost of baking and delivering is $1 per barrel, so that the baker has a return of $5,90 for every barrel bought at $3.80 to $3.90. Some allowance must be made for bad debts, for although the amounts are generally small, bakers make losses by giving credit."

Prof. Wm. Jago, representing the British National Association of Master Bakers, and who has been on a visit to the United States, is coming in for some sharp criticism, I observe, from several milling papers. The Modern Miller charges that this gentleman was brought to this country by a certain milling paper in Minneapolis, and to be used to boom the flours of a certain number of millers, who were willing to pay him to come, and pay him to take back their brands as the representative flour brands of this side of the Atlantic. These brands, it is alleged, will be almost altogether of spring-wheat flour, whilst the interests of winter-wheat millers are to be passed by. It is a serious charge to make against the journal in question of lending itself, if it did so, to questionable methods of the character intimated, while the reflection on our visitor is, perhaps, more condemnatory. It will be in order for these gentlemen to rise and explain, for it is to be said that the kindly welcome that was accorded to Prof. Jago by the milling firms of the country was on the supposition that his visit was to advance the common interest of exporters of American and Canadian flour, and to give British consumers an intelligent and somewhat comprehensive knowledge of the character of the flour manufacturer in this country.

* * * *

A trade contemporary takes kindly to a remark I made in this page a few months ago suggestive of laying hold of a trade pointer whenever one comes across it. The Helper, the journal referred to, says: "Now there is trade wisdom. And the wisdom of this progressive 'dusty' is shown not only in his 'lay hold of it,' but in his prompt publication of the pointer for the benefit of his craft. He is a simon-pure benefactor—a trade lifter—an intelligence spreader—a business promoter of a valuable sort. May his tribe increase." These pointers are not the monopoly of any particular few in the milling or any other trade. I have no hesitation in saying that out of the several thousands of readers of the CANADIAN MILLER every month there are scores who might occasionally send a pointer, a suggestion, a thought that would be practically helpful to their brother dusties'. Are we lazy? Or is it selfishness that causes so many to hold back in this matter? I believe that it is just simply that men don't want to take the trouble of sitting down for a few minutes and with pen or pencil placing their thoughts on paper. Call that selfishness, or laziness, just as you like. The editor can be trusted to lick the ideas into shape if there is any concern as to the shape in which they may reach the paper. I am anxious to see a good budget of correspondence from millers this winter.

* * * *

W. W. Ogilvie has recently returned from a trip through the Northwest. Talking about the crops he said: "This year's crop in Manitoba and the Territories was of a very superior quality. The weather for harvesting and threshing, and for hauling the grain to elevator, has been exceedingly fine. The only drawback to the farmers are the low prices prevailing not only there, but throughout the world. This season's crop will grade at least seventy-five per cent. No. 1 hard—the best quality in the market. The yield, both in point of quality and otherwise, surpasses that of last year, and especially as frost rendered no damage. The east-bound movement of grain has begun. Thus far the receipts at my Montreal mills of this season's crop exceed 150,000 bushels, and we have also stored 330,000 bushels in the Fort William elevator. The daily deliveries at interior elevators in Manitoba and the Northwest now vary from 150,000 to 175,000 bushels per day. During my travels I noticed that the farmers are gradually engaging in mixed farming. This is a move in the right direction. There is also a tendency to locate on farm lands near Winnipeg. Of this city itself I cannot speak too highly. The improvement since last year is simply marvellous and augurs well for the future of that country. The population is increasing at a rapid rate, while there is no boom, building operations have been carried on this season on a very extensive scale. The city wears a solid and prosperous appearance. Everybody appears to be busy, and there is a notable absence of the idle element, which characterized affairs there for several years after the boom."

DIFFERENTIAL MOTION.

IN a paper read before the Pennsylvania Millers' State Association the following views are expressed by Mr. E. T. Butler on the subject of "Differential Motion":

"I believe I have shown in my remarks that we have from mills of different systems a large variety of products, varying in quality and quantity produced from a given amount of wheat. As a matter of course, the primal cause of this well-known discrepancy rests with the several flow sheets embodied in the plants. A flow sheet should represent each and every element of a mill plant, harmoniously organized, sufficiently explicit in every detail to enable a skilled millwright to arrange the same in a mill to the minutest details, because a slight break in the design somewhere may greatly impair the results. A bit of material traveling the wrong way; a machine running too slow, and so overcrowded; an excessive or insufficient differential in the rolls; something somewhere to destroy the harmony of the plan, will result in comparative disaster. This applies alone to a correct design improperly carried out, because it little recks how the ordinary flow sheet is put together; the greatest departure from its design, if it can be said to have any, will be found an improvement.

The flow, then, is all-important. While some machines may have marked advantages over others of the same class, notably in roller mills with each roll operated directly from the power shaft, which so facilitates the different shades of differentials necessary to the success of a mill plant, yet the key to success is to be found in the flow, with all its many elements of success or failure so closely related and blended together. To enumerate these different elements in the order of their importance, I would place corrugations at the head of the list. Next in order naturally follow differentials, then separations, and behind all these the operator, because no man, however skilled in handling a mill, can produce the best possible results when any of these are lacking.

To come at once without further preliminaries to the subject assigned me, which I have placed second in order of importance, I would say at the outset that any and all combinations of differentials will produce results good, bad or indifferent. This may account in a measure for the discrepancy I have mentioned. The reason why errors are so persistently retained where they so often occur is because the effect produced seldom manifests itself at the locality of the cause, but always further along in the system where they are sought for and, of course, never found. Frequently, too, this inseparable combination, cause and effect, are as far separated as the first break and the flour barrel. Is it any wonder, then, that they escape detection? This applies particularly to the wheat breaks, where good, bad and indifferent work appears so nearly alike in the blended products in the hand, that the most skilled often fail to detect the slight shades of difference in the work of the breaks.

When I place differentials second in order of importance of all the elements that combine to produce a milling plant, I do so with full confidence in my position, having repeatedly experimented and proved the different combinations along a scale, extending each way, of minimum and maximum limit of usefulness, beginning at 1-5 to 1, through all the intermediate shades of differentials best suited to the several reductions, up to 5 to 1. This is the absolute limit of usefulness, and I contend that no mill can attain the best possible results unless it employs all of these, with the means of quickly changing the maximum differential, best suited to dry, hard wheats, to, say, 3 to 1 for damp, soft wheats. This may seem paradoxical, but it is nevertheless true, that by changing differentials alone on some of the wheat breaks, other elements embodied in a system being correct, a short or a broad bran can be produced at will. Need I say to you which is the best work?

These differentials apply alike to all lengths of system from the four-reduction mill (two on wheat and two on middlings, the shortest possible successful roller plant) to any number of reductions—which, however, should never exceed five breaks on wheat.

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

ARE ONTARIO MILLERS LOSING MONEY?

CURRENCY is being given to a statement made by the Montreal Trade Bulletin, that the depression in milling operations in Ontario is having the effect of depreciating milling property, seriously, and causing not a few to drop out of the business. An instance is given of a practical miller, who is said to have put $10,000 into a mill in the province and in a short time dropped every cent. He then stepped out and left the mortgagee to take possession of the property and make all he could out of it. The further statement is made that a number of Ontario millers are mortgaged up to the hilt, as a result of the past two years' unprofitable trade.

It is a fact there is no use in glossing over that there have been better times for millers than those of the past two years. It is equally true, that the same remark can be applied to every branch of trade, without exception. Where is the business that has not suffered, and suffered seriously, from the trade depression of the past two years? A practical miller may have lost $10,000 in milling during this period. We do not know to whom reference is made by the Bulletin. It would be an easy matter to mention the names of those in various branches of business, manufacturing and mercantile, who have lost more than one $10,000 in their undertakings of the past few years. With some knowledge of the milling trades of Ontario we venture the statement, taking into account the amount of capital invested in the business, that there have been fewer failures during the past two years in milling than perhaps in any other branch of trade.

Flour has been low in price and the export markets, at least, have been glutted with mill products, making sales difficult and risky. Millers have had to exercise their best judgment in the management of their affairs, watching the small economies as they never watched them before. But as a result of these methods of management they have kept their mills grinding, and in not a few instances we could name, money has been made by the miller. It seems reasonable to suppose that the man who lost $10,000 in milling in the short time alleged by the Bulletin must have been exceedingly impracticable in some important matters.

Within the past two years there has been no inconsiderable extension of milling properties in Ontario. There might be named the large Campbell mill at West Toronto Junction, the new mill erected by the Peterborough Milling Company, of Peterborough, an important addition to the Royal mills of M. McLaughlin & Co., of this city, and others. Besides this, the mill-furnisher has had an active year in placing new and improved machinery and enlarging the capacity of many of the best mills of the country.

These are not omens of failure. We are aware that the complaint is sometimes made that mill-building is being overdone in the province, but this is to be said that the men who have branched out most largely during the past few years are known for their knowledge of the milling situation; and their ability as practical millers, as well as shrewd men of business, is not to be questioned.

It would be a mistake to make any statement at the present time, in view of the general financial stringency, that would encourage any unnecessary expansion of milling operations. Rather it is a time for everyone to take in sail, at least to go it slow. But saying this much, we think that a careful analysis of the milling trades in Ontario give evidence that the Montreal Trade Bulletin has not stated correctly the real position of flour-milling in the Province.

EDITORIAL NOTES.

IN answer to the conundrum: Shall we go on growing wheat? a cotemporary answers: Shall ducks go swimming? Shall gravitation go on acting? Shall hungry persons go on eating? Shall topers go on boozing? The answer is capable of indefinite expansion and extension.

THE flour trade of Boston do not propose to fall into the hole that holds not a few dealers in other places, and have adopted a regulation requiring that all flour sold in the market shall be ordered out in thirty days or less. The iniquitous practice of dating ahead has probably had its strongest grip in some of the old country cities, notoriously London and Liverpool, but it is by no means confined to these. Wherever it has an existence it ought to be frowned down and dealt with in as vigorous fashion as is now proposed by Bostonians.

WE made some comment in last month's MILLER on the probabilities of the Argentine Republic becoming an active wheat competitor in the immediate future. Confirmatory of this view the London correspondent of the Northwestern Miller says: "One of the most extraordinary features of the past season has been the abundance of Argentine wheat. The exports from that republic have, in fact, for the first time, exceeded those of India, the total exports from Argentine in the six months, ended June 30, being about 3,200,000 qrs., against 1,700,000 qrs. in the corresponding half year of 1892. There have, however, been loud complaints among receivers here, regarding the quality of this wheat, which have tended to make it the lowest-priced wheat on the market, with the single exception of Varna or Bulgarian wheat."

WITHIN recent years a number of farmers' elevators have been erected in Manitoba and the Northwest, and operated as joint stock concerns. The theory seemed to be that proper elevator accommodation in a given locality would be a help to the farmers of the locality, and the farmer argued that if an elevator was a necessary adjunct to the prosperity of the place, he ought to have a part in the ownership. Several of these elevators have lately passed into the control of private parties, an indication, presumably, that the farmer-stockholder and elevator-director has not found his management the most profitable. This centralizing of the management of the affairs of the farmer, domestic, business, and general, in his own hands, as reflected in institutions like the Patrons of Industry and the Granger movement, may be carried sometimes too far. An oligarchy, even of so reputable a section of the community as farmers, would not be desirable.

A STUDY of the monthly bank statements do not encourage an optimistic view of the trade situation. On the 30th of April last the total deposits of the banks were $14,000,000 in excess of those of a previous year. On the 30th of September these had been reduced until they were below those of a year ago, while the loans and discounts of the banks had increased $17,000,000. It would seem folly to close our eyes to the fact that all conditions point to a serious depression for the next six months. Money is undoubtedly slow, and there is little ground for expecting that it will become materially active in the immediate future. A fair wheat crop has been harvested, and where it may be wanting in quantity it is levelled up in quality. But prices continue to keep abnormally low. There is no need, however, for anyone to become unnecessarily blue over the situation. The conditions are common to almost all parts of the world, and in Canada we are better off than in many other lands.

THE only let-up the Milling World can see to the continued depression in the flour markets is a succession of poor crops for several years. Our cotemporary thinks this will come. The prayers of the pulpit and closet as each seed-time returns is for a bountiful harvest. "May the rains fall, and the sun shine, and the earth bring forth of her fruit abundantly" are the breathings of the devout heart. We have been getting a surfeit of these good things, and the depression has increased as the harvests become more abundant. We do not say these things with any thought of irreverance, nor is there need for such to be implied. It is a phenomenon of political economy that is interesting to study. Abundant crops do not always bring riches. We may have so much of a good thing that the good thing loses its value. Yet, while there has been a surfeit of wheat, a supply at least beyond the ability of dealers to buy, and thousands of bushels of grain have been allowed to rot, peoples by the tens of thousands are crying out for bread to keep body and soul together, and no bread comes. We leave our readers to pursue further the thoughts that such facts naturally suggest. To employ a simple and commonplace colloquialism, "It's a funny world."

IT has been proclaimed with a good deal of vehemence lately that the growing speculation in grain has proven the ruination of the market. We reach a period now when speculation has become an unimportant factor of 'Change, and prices of wheat were perhaps never lower. One writer places these two conditions in the relation of cause and effect. "The prevailing low prices of wheat," he avers, "is the dullness of speculation throughout the world. Speculation in wheat has not been at such a low ebb in many years as at present. Even among producers, the disposition is to sell, and the result is that out of a crop supposed to be the smallest on record, in proportion to population, farmers are selling such extraordinary quantities that the country can export at an unprecedented rate and still witness wheat accumulating weekly at the principal market centers. One result of these conditions will be that all the available surplus of wheat in the country will be shipped out in the first half of the year, leaving little to be done by grain merchants in the last half. Another result probably will be that the extraordinary low prices now prevailing will be followed next spring by prices unduly high."

A WELL-ARGUED plea for the small custom mill is made by a writer in the Mechanical News. The trend in mill building of late years is in the direction of larger mills—mills in fact on quite a palatial scale. This means, in the opinion of this writer, a centralizing of interests in a few large concerns, to the sacrifice of the smaller communities. The small mill, or as it is somewhat fitly termed, the missionary mill, is a pioneer in the opening of every new community, and the planting of a mill of the kind is going to add to the commercial worth of these communities. "Small mills," we are told, "have the commercial advantage that they enable more business to be done with a given amount of circulating medium, than where all the product of the district is sent away and there is imported or manufactured material from elsewhere. They serve to make the farmer, the miller, and everyone else in the district, partners and kindred. They help to make the neighborhood self-supporting and independent of freight rates; for that district which must buy its own flour, lumber and other things from outside, and must bring it over one freight-route is to a certain extent under the thumb of the owners of the route."

"DO not let anything connected with the boiler in your charge run from bad to worse," wisely remarks the American Miller, "with the idea that at some certain time you will have a general overhauling and repairing, because an accident may occur at any moment, involving serious loss of life and property."

VIEWS AND INTERVIEWS.

Wheat Bread.

The conclusion that wheat bread is unfit for dyspeptics, sometimes jumped at because ill effects are noticed to follow its use, is erroneous, says Food. On the contrary, it has been pointed out by Bouchard and others, that farinaceous food is peculiarly adapted to some dyspeptic patients. It is the microbes in the starch which is capable of producing irritating acids, that cause the trouble. To avoid this, Bouchard recommends that only the crust or toasted crumbs of the bread be used by dyspeptics, particularly those whose stomachs are dilated. The reason of this is explained by the fact that baking temporarily, though not permanently, arrests the fermentation of dough. When it is again heated by the warmth of the stomach the fermentation is renewed. In cases where the bread is toasted brown through, the fermentation is stopped permanently.

About Correct.

Writing on the subject of boiler practice, one contributor to the Boston Journal of Commerce says: It is a common saying among engineers that the boiler-maker who condemns a boiler never gets the order for a new one. They seem to have a grudge against him, although he is not to blame in passing his honest judgment. We do not know how far this is true, but we do not think any intelligent owner would act in that way. There is an instinctive feeling, no doubt, that the boiler-maker may have condemned to sell a new boiler, but this is very seldom true, for we are inclined to think that the makers allow the mill to assume too much risk rather than condemn a boiler outright. A boiler-maker will keep a boiler running long after the insurance companies, with their constant supervision, have considered it dangerous to run. We think that, if a mill manager expects a boiler-maker to keep him warned against all probability of danger, he will not do so, but will be inclined to run many risks before actually condemning a boiler.

What is Electricity?

The rapid advances that have been made during the past ten years, both in the practical application of electricity to the service of mankind in the knowledge of the principles of the science, have brought us in the opinion of S. F. Walker (in the London Electrical Engineer) to the point at which we are obliged to ask ourselves, What is electricity? If the advance is still to continue? Up till very recently, notwithstanding the wonderful guesses that have been made by those not actually engaged either in the study or the practice of electricity, and the closer and closer approximations that have been made by those mathematicians who have given attention to the subject, it may fairly be said that we knew absolutely nothing as to what the mighty force we dealt with was. And, in addition to this, it has not been necessary that we should know what electricity was, so long as we were thoroughly cognizant of what it could be made to do. As far as the writer is able to understand the matter now, electricity is simply motion of the molecules of the different systems which are the subjects of electrical action, just as heat, light and sound are, and the only difference between these forces is the rate of the motion. The motion of sound, as we all know, is comparatively slow; that of heat and light very rapid. That of electricity would appear to be somewhat between the slow motion of sound and the rapid motion of the heat waves, whose motion is slowest. And it would appear that the wonderful adaptability which electricity shows for every kind of work is due entirely to the position which its rate of motion occupies in the scale of the energies. It would also appear that the reason this wonderful agent lay dormant for so many ages, and is even now only partially developed, is very largely, at any rate, because we have no sense which responds to the particular periods of vibration comprised within the electrical range. The writer will conclude this brief notice by remarking that heat currents would be far more efficient than electric currents if we could make use of them as we do the latter, and that, as he before remarked, the reason electricity is such a useful agent appears to be because its rate of vibration is sufficiently high to admit of rapid transmission, yet not sufficiently so to be destructive. It only becomes destructive when it is transformed into heat.

THE QUESTION OF "AGE" IN FLOUR.

IN the October MILLER we presented a paper by Mr. W. T. Bates from the London, Eng., Miller, on the subject of age in grain and flour. Below we give another English view of that question, from the same journal, written by one signing "Ceres." He says: It was with great pleasure I saw the scientific question, "Does wheat become stronger with age?" dealt with in your last issue in the form of an article signed by that able scribe, Mr. W. T. Bates, but it was with great disappointment that I found, when reading Mr. Bates' article dealing with the question and considering the basis on which he relied in arriving at his conclusions, that I was totally opposed to them. Further, on dissecting his article, I was astonished to find that the foundations, in my opinion, on which Mr. Bates has built up his reasonings were done away with by the very conclusions his pen had arrived at. In one part of Mr. Bates article I read the following passage:

"When the sickle severs the ear of grain from the root, we may, I think, say that the life of the plant is at an end, and that no further development can take place. There is, undoubtedly, a further hardening and fixing of the various constituents of the berry in some cases, but it is impossible that any new properties can be formed, and yet we all believe that wheat becomes stronger after it is practically dead."

While a little later the following passage occurs:

"It can not be contended that frost or wind has produced more gluten in the wheat; no, those agencies have improved it only by driving out the superabundant moisture. The bulk of grain will be somewhat reduced, it is true, by this drying-out process, and the gluten slightly increased relatively, but this will not account for the whole of the improvement. The true explanation, I think, is that the drying process has hardened the gluten and thus improved the whole mass, or in other words, by the drying out of the moisture the weak soluble gluten has been converted into strong insoluble gluten."

Now which of these two passages will Mr. Bates rely on? For there must either be a development by age in the gluten, or it must remain in the same condition as when the wheat was cut. My experience teaches me that the life of the wheat plant is not at an end when the sickle severs the ear of grain from the root, for any one with the microscope, with a fairly high power, can observe the gradual growth and closing of two valves, with their multitudinous number of hair fibres, over the cord by which the nourishment from the air and earth was conveyed into the berry, after it has been severed from the straw by the threshing process. The reason of this is, as every one knows, a provision that a kind Providence has made to prevent the moisture penetrating into the berry at this point when the grain is sown. If this were not so, the germ could not obtain any nourishment from its parent when it starts into life. Now, as to the development of the gluten I am unable to agree with Mr. Bates when he says:

"I give it as my confirmed opinion that, for the greater part, there is little or no difference in the strength of new and old wheat harvested under a blazing sun. When ripe, under such conditions it is just as fully developed, and all its qualities as firmly fixed as they ever can be, for the reason that all the moisture, which alone can do mischief, is dried out of it."

It must always be borne in mind that in the growth of the wheat berry there are three things that are developed for the purpose of nourishing the germ when it has arrived at the period of "feeding on its mother," the formation of starch, then gluten and lastly, cerealine, which is the agent for dissolving the endosperm and so feeding the germ when it is sown and first starts growing. We know that a farmer must choose the time of cutting wheat, or he may lose not only the weight of produce per acre and the specific gravity or weight per bushel, but also the relative proportion of flour, bran and albuminous matters obtained. The reason for this is that, after the gluten has become developed, the stage for producing the "destructive element" sets in, and that is why the farmers cut wheat before it is ripe, in order that the "destructive element," cerealine, may not increase too fast and so diminish the strength of the berry itself. Thus, from three equal plots taken from the same field of wheat upon thin limestone soil at North Deighton, in Yorkshire, cut respectively 20 days before the crop was ripe, fully 10 days before ripeness, and when fully ripe, Professor Johnston found the following composition:

When cut	In the Flour. Moisture per cent.	Gluten per cent.
20 days before it was ripe	15.7	9.3
10 days before it was ripe	15.5	9.9
Fully ripe	15.9	9.6

I will not go further with Mr. Bates' answer to "Does wheat become stronger with age?" as I think he will come to a different conclusion if he considers the whole question and watches the development of a grain of wheat from the time it is sown in the ground, as seed, until the hidden life produces food which, although it may be ground into flour, is not dead, but still developing; but I would like to quote one more passage from among Mr. Bates' extraordinary assertions. He says:

"The commonly accepted idea of strong wheat is wheat containing a large proportion of gluten, the characteristics of which are the ability to make a strong, tough, tenacious dough, and a good high loaf. Dough which can be stretched to a great length shows tenacity and an undoubtedly large percentage of gluten, and as such is strong, and if gluten is strength, surely this large quantity should make ideal bread; but, although gluten is the source of strength, in the sense that it retains the fermentative gases in the rising dough, yet to speak of it as strength is to express only half a truth, as in reality it may be a source of weakness under certain conditions. However, it is quite true that without gluten we can have no strength, so therefore gluten must be the basis of all strong wheat."

This statement I can not let pass without a contradiction as to what is strength in flour. For a wheat may have a large proportion of gluten and yet be a weak wheat; the percentage of gluten in flour may, by the "washing-out" process, be very high, and yet not make a lofty loaf of bread, and never can quantity of gluten be a source of weakness. If we examine carefully how starch, gluten and cerealine are produced from protoplasm by the action of sunlight, the decomposition of carbon-dioxide, and the assistance of nitric acid and water, we find that gluten is made strong by the welding together of its tissues. Therefore, strong wheat is that which contains gluten, and not a large quantity, with strong tissues. The amount of gluten with these well-developed tissues is another question for the consideration of bread-making, as it then is the difference between a lofty loaf and the yield of bread from a given quantity of flour.

ATTENTION TO LOOSE PULLEYS.

IT would seem unnecessary to speak of the great need of attention to loose pulleys and other "overhead work" in shops, as everyone must know of the importance of those things, yet they are shamefully neglected, as an incident of the other day testified to me. A countershaft was squeaking and grinding over a lathe that is never oiled (as none of the tools are until they refuse to go), and finally the shaft actually twisted in two, and had not the loose pulleys caught with the cone in such a way as to wedge and prevent their fall, a serious accident might have occurred, as men were working below at the time, but fortunately such was the case, and unfortunately the same thing will be repeated with the new countershaft when it is made, as a lesson is never taken until some one is badly hurt.

TO PREVENT RUST IN TOOLS.

A good preparation for preventing tools from rusting is made by the slow melting together of six or eight parts of lard to one of resin, stirring till cool. This remains semi-fluid, ready for use, the resin preventing rancidity and supplying an air-tight film. Rubbed on a bright surface ever so thinly it protects and preserves the polish effectually, and it can be wiped off nearly clean, if ever desired, as from a knife blade; or it may be thinned with coal oil or benzine.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

THE RUSSIAN AS A MILLER.

AN important volume under the title of the "Industries of Russia" has been translated into English by Mr. J. M. Crawford, American Consul-General at St. Petersburgh. We have been so accustomed to look upon Russia as the home of the oppressed, where stagnation is supposed to be the characteristic of the country, rather than enterprise and progress, that it is refreshing to learn from Mr. Crawford something of the business activity of this great country. His work is voluminous, covering five handsome volumes, and within the compass of these one will obtain full information as to cotton goods,, flax, hemp and jute goods, woolens, silks, the paper industry, leather, the India-rubber trade, wood-working industry, machines and implements, glassware, ceramics, chemicals, matches, naphtha. cement, climate, soil, rural population and landed property, systems of agriculture, cultivation of the soil, breadstuffs, grain trade, flax and hemp products, gardening and viticulture, live stock and the cattle trade, rural economy, farming machines, agricultural school, industrial rural credit, forestry, household industry, fish, rural industries of the Caucasus. rural industries of Turkestan, mines and metallurgy, and an exhaustive article on Siberia's resources and her great railway, now being constructed. The impression that there is little of a commercial and manufacturing nature to enlist interest within the realm of the Czar is quickly abused in a study of these volumes.

Not the least of the growing industries is flour milling. Russia is so far away to the people of this western continent that we are not likely to think of it as a possible factor in business competition. In some branches of trade this may be so, but in flour-milling more and more is it becoming necessary for the miller to seek an outlet for his product in export fields. The population of Canada cannot nearly consume a quantity of flour equal to the capacity of its mills. It must go elsewhere if these mills are to be fully employed. In a larger degree, doubtless, with her immense milling plants, is this true of the United States. So that in America we rest the success of our milling trade on the consumption and requirements of other countries. As the market has held for two years back it is hard to say what might become of flour, if a new competitor, of any size, was to step into the field. Is this competition likely in the near future? The Northwestern Miller makes the comment that "We know Russia as a tremendous wheat grower, and the Russian as a miller is competent under proper encouragement to make flour as well and economically as an American. One might imagine a condition in the future whereby Russia would become not only a serious rival as a wheat seller, but a more serious one as an exporter of flour."

Mr. Crawford has this to say on the subject :—"On the whole, it may be said that the number of mills in Russia is larger than is necessary for home needs. The mills bearing the manufacturing character are constructed according to the latest demands of technic, and are capable of producing flour of the highest grade, and much better than that required by the bulk of the Russian population. In recent years, with the development of these perfected mills, difficulties arise with regard to the sale of especially the high grades of flour. Therefore, many of the mills have had to change the character of their produce, namely, to work, in more considerable quantities, the medium and lower grades than would seem to be necessary, according to the perfect construction of the mills and the high quality of the grain at the disposal of the millers. The sale of these lower grades is considerably more warranted in Russia, as compared to the higher sorts, not so much because of the price as owing to the modest demands of the bulk of the population, which pays less attention to the aspect of the bread—that is, its whiteness—than to its nourishing qualities. Hence, it would seem that, owing to these conditions, nothing would be easier to Russia than to ship abroad the highest grades of flour finding no ready sale in the interior markets, namely, to England, Belgium and Holland, countries where no duties are placed on grain in general and no special duties on flour. However, it appears that precisely these same countries also consume flour of higher grades in inconsiderable quantities, namely, for some special sorts of bread, and use chiefly the second and the lower sorts of flour for the baking of bread. Thus, in England, for instance, as a sample of flour used for the bread consumed both by the rich and poor classes, the so-called household bread, may serve the Russian pervach (blue and red mark), that is, flour of second and third grades, or else the same sorts, the sale of which is quite warranted in Russia, and at such good prices as would not be received abroad if they exported. From Russia, flour is sent abroad in very inconsiderable quantities, namely, about 2,500,000 poods yearly. The export falls mostly to the south, and Odessa and Sebastopol are the chief points of shipment. The markets for it are European and Asiatic Turkey, Egypt and Great Britain. Turkey consumes the medium and lower grades of flour, and the other two countries, mainly, the higher qualities. The shipment of flour to Italy, France and Spain bears a casual character. The greatest activity with regard to the export of flour is shown by the mill of Veinstein in Odessa, which began the exporting business as early as 1863 and has a reputation so firmly established that its brands are bought in England according to the mark only, their quality being not inferior to that of the Hungarian flours, nor their prices as high. About 60 per cent. of the total export of Odessa falls to that mill."

CURRENT MENTION.

MILLERS who are doing a trade with Quebec and the Lower Provinces are interested in the announcement that rates on flour and grain for these points were increased on 13th inst. to last winter rates, which is an advance of about 5 cents per bbl.

The millers of Canada have good reason to feel gratified at the success of their exhibits at the World's Fair, Chicago. If we except Minnesota, which is the great flour State of the United States, a larger number of millers in Canada have carried off prizes and awards than in any individual State in the American Union. A list of Canadian prize winners is given in our news columns.

The old chestnut that millers are to blame for the reduced price of wheat was the statement submitted by E. W. Richards, of Tilbury, before the Dominion Government Comptrollers at a meeting of farmers in Kent county a few days ago. So few farmers themselves believe this nonsense that it was noticeable that beyond the bare statement of Mr. Richard's the matter was not followed up either by the Comptrollers or by others who were consulting with the Dominion officers. There is not a tittle of evidence to show that Canadian millers have combined to keep down wheat prices. On the contrary, the discussions of the Dominion Millers' Association go to show that there is a constant effort being put forth to advance the interests of the farmers, and that whatever prejudice may have existed between farmers and millers in the past, the wise policy to-day is for these two sections of the community to pull together : and they do pull together.

There is seldom an excuse for a dirty or untidy place of business even where the business itself may not, perchance, be of the most cleanly nature. Certainly no store, manufacture or mill that makes up or sells that which is to constitute food for men, women and children, should be other than cleanly and inviting in all its appointments. This is the thought which the Canadian Grocer would impress upon those of its readers who handle flour or feed. It counsels a tasty window display. Samples of cereals and flour put up in glass jars look well, if kept clean and frequently renewed. "Neatness is one of the sure roads to success, as a housekeeper will prefer buying at a well-arranged and tidy store than from an ill-arranged and untidy one." Keep the flour stock away from the corner of the store where oils are stored. Paper sacks should be changed often as they become faded and soiled by exposure to the sun. And all important, only keep for sale brands of flour of known good quality that can be safely recommended to customers.

THE FLOUR MARKETS.

LITTLE of interest can be written of the flour markets. Depression continues. Sales are comparatively light and prices unsatisfactory. There is no encouragement to push export trade, foreign markets remaining dull and over-stocked. Oatmeal is in good demand, and so of rolled oats. The Northwestern Miller, of current date, says of Minneapolis markets : "The mills rolled up another big output last week, making 234,375 bbls.—averaging 39,602 bbls. daily—against 229,740 bbls. the week before and 215,090 bbls. for the corresponding time in 1892. Of the 22 mills in motion a week ago two have dropped out of the list on account of breakdowns. The output this week will therefore show something of a decrease. Everybody is possessed of a desire to get flour as fast as possible before the close of navigation, and it is only physical conditions that prevent the quantity ground from touching much higher figures. The weather could not be more perfect and the water power is ample for the heavy work being done. Millers are daily looking for a change to a lower temperature and the resultant stopping of lake navigation. The flour market has been exceptionally flat for a week back, the weakness in wheat confirming buyers in their bearish opinions and confining the transactions to the smallest limits. For the week ended Saturday the orders booked for flour probably did not amount to 100,000 barrels. The mills, of course, are working to a considerable extent on old orders. The export trade is about as light as it well could be, the bids of foreigners ordinarily being 1s or over below what flour can be sold at without actual loss. This makes it rather difficult for millers to dispose of their bakers' as fast as it is made. The domestic price of patent is a shade lower than it was a week ago. There is a very good demand for low in this country as feed, most of it being disposed of in this way. The direct export shipments by the mills last week were 48,485 bbls., against 67,910 bbls. the preceding week."

PRICES OF FLOUR AND MEALS.

Toronto : Flour (Toronto freights) Manitoba patents, $3.80 to $3.90 ; Manitoba strong bakers', $3.60 to $3.70 ; Ontario patents, $3.10 to $3.20 ; straight roller, $2.80 to $2.90 ; extra, 2.50 to $2.75 ; low grades, per bag, 90c. to $1.10. Bran—$12. Shorts—$14 to $14.50. The Flour and Grain Trade Bulletin of the Dominion Millers' Association says : Straight grades at $2.75 to $2.90 west ; and $1.20 per 98lb. in buyers' bags, and 90 per cent. patents at $2.90 to $3.00 ; and 85 per cent. patents at $3.15 f. o. b. for Lower Provinces. Bran, $11.50 and $12.00. Shorts, $14.00.

Montreal : Manitoba patents, best brands, $3.70 to $3.80; straight rollers, $3.10 to $3.15; extra, $2.90 to $3.00; superfine, $2.60 to $2.90 ; Manitoba strong bakers', $3.40 to $3.60 ; best brands, $3.60 to $3.70. Oatmeal. Standard, per bag, $1.90 to $2 ; do. per bbl. $3.80 to $4.10 ; granulated, per bag, $2 to $2.05 ; do. per bbl. $4.20 to $4.30 ; rolled oats, per bag, $2.05 to $2.10 ; do, per bbl. $4.25 to $4.35. Bran, $15 to $16 ; shorts, $16 to $19 ; mouillie, $22.

Winnipeg, Man.: Quotations in small lots to the local trade are : Patents, $1.70 ; strong bakers', $1.55 ; XXXX, 80 to 90c. Oatmeal, $2.70 ; cornmeal, $1.75 ; buckwheat flour, $4 ; rye, $3. Beans are quoted at $1.80 to $1.90 per bushel ; split peas, $2.40 to $2.50 ; pot barley, $2.40 to $2.50 ; and pearl barley, $4 per sack.

Office of the CANADIAN MILLER,
November 15, 1893.

THE GENERAL SURVEY.

WHAT is to be the outcome of wheat prices? is the problem with which grain experts of this continent and the older world are just now wrestling. Everyone has talked of wheat having reached bottom; has it? December wheat is on record as having touched the lowest point ever touched for that month. Stocks of wheat on hand almost everywhere are abnormally large, and in the United Kingdom are much in excess of what is usual at this time of the year. Russia is showing her hand as an active competitor and is placing wheat in London and Liverpool at a price that renders export, in competition, from America out of the question. India is a factor that has to be considered, and as we pointed out in these columns last month, so is the Argentine Republic. Both these countries are now selling freely.

Mr. Broomhall, editor of the Liverpool Commercial Trade News, believes that wheat is cheaper at current values than it should be, taking the general position of the cereal into account. This condition he makes chargeable upon the American farmer, who rushed his wheat to the market the early part of the season before the market had recovered from the heavy stocks of the previous year. On top of this came an unexpected accession of 16,000,000 bushels from South America. The conclusion of the whole matter in Mr. Broomhall's view is in these words: "Not for much longer will the seller be calling to the importer to buy. For two years supply has largely overtopped demand, but now the requirements are quite certain to fully equal the present and prospective supplies." Next year the wheat area, he thinks, will be further reduced, and in this way conditions will be levelled up, and the outlook will become more encouraging for wheat producers.

The Minneapolis Market Record of Nov. 7 says: "The cause for the present weakness in wheat is easy to locate, and is due, principally, to the large and increasing supplies. The visible supply of this country last week increased 2,069,000 bush. This makes the present total 71,396,000 bush. The amount held in Europe is largely beyond immediate requirements, and the amount afloat for Europe showed an increase for the week of 782,000 bush. The demand in this country for export is very small, and, as this is largely an exporting country, the effect, of course, is severely felt. That gives us weak markets. Europe is overstocked, and Russia is offering liberally. That wheat, with what other countries are sending, is more than is required, when the home supplies are so large as now. This makes foreign markets weak. When, from any cause, a little strength is infused into the markets of this country, European markets show no sign of sympathy because of the large amount that is available to them at less than our present prices. India, while still handicapped in its shipping by the silver question, is shipping more freely now than for months. and, as is known, has a large surplus. Shipments from Russia will soon be shut off by the cold weather, but the Republic of Argentina has a quarter of its surplus left from the last crop. This amounts to some 9,000,000 bush. The present acreage for the new crop is reported in good condition, and will be ready to cut in about two months. Roumania is about as large an exporter as Argentina. Owing to the large supplies European buyers have little regard for the course of American markets, and appearances indicate that little help is to be expected from them until their stocks are reduced and the future prospects for obtaining more from other countries than this are not so favorable as now. Without their help our supplies will continue to increase, and the large supplies are what are bothering everybody and causing such weak markets."

Great difficulty is experienced in obtaining information of the actual yields of wheat in different countries. There have been some very bullish statements published, pointing to a wheat shortage of many millions. Against this comes such news as we have already chronicled from South America showing quantities of wheat to exist where they have not been expected. And worse than this is the growing practice of manufacturing crop news to suit the purposes of various speculators. Altogether it is a period for the grain men where the safest move is a slow move.

CURRENT PRICES OF BREADSTUFFS.

WHEAT: Toronto: White, 57c.; spring, 58c.; red winter, 56c.; goose, 56c.; spring, Midland, 59c.; No. 1 hard, 71c.; No. 2 hard, 69c.; No. 3 hard, 66c. The Grain Trade Bulletin of the Dominion Millers' Association quotes: Ontario fall wheat, very little offering. Holders asking 57c. to 58c. straight for fall, and 58c. to 60c. for spring. Montreal: No. 1 hard Manitoba wheat, 69 to 70c.; No. 2 hard Manitoba do., 67 to 68c. Chicago: November, 60⅞c.; December, 61⅞c.; May, 69c. St. Louis: For cash, 57c.; November, 57⅛c.; December, 58⅞c.; 66¼ to 66⅜c. asked for May. Duluth: No. 1 hard, 61¾c. for November; No. 1 Northern, 60¾c. for November; No. 1 hard, 61c. asked for December; No. 1 Northern, 60c. asked for December; No. 1 hard, 66¾c. for May; No. 1 Northern, 65¾c. bid for May.

BARLEY: Toronto: Obtainable at 40 to 41c. A Buffalo despatch of 13th inst. says of United States markets: There has been a considerable increase in visible supply of barley during the past week, stocks in principal accumulating points now amounting to 3,208,000 bushels against 2,816,000 bushels last week. The increase has been principally in Buffalo, where large lake cargoes being received have augmented the supply There are now 809, 872 bushels in store here, or about 100,000 bushels more than at this time last year. There is a very large portion of this cheap grade barley fit only for feeding purposes. There is a good supply, however, of the better grades, but no very great demand. Malsters pick up an occasional lot for immediate wants, but they are not taking up much, as they consider the prices too high. Sellers' quotations are: Western, No. 2, 60c.; No. 3 extra, 55 to 56c.; No. 3, 50c.; sample. 47 to 48c.; state, choice, 70 to 72c.. No. 2, 65 to 68c. At New York—In store to-day, 150,000 bush; market quiet; western sample, 55 to 56c.; No. 2 Milwaukee, to arrive, 62 to 63c. At Chicago—Stocks, 121,000 bush. a decrease of 100,000 bush. during the week; the market is dull; No. 2 nominally quotable at 55c. At Milwaukee—There has been a decrease of 100,000 bush. for the week, stocks now being but 263,776 bush; market quiet and quotations lower; No. 2 spot and November, 51c.; December, 52c. At St. Louis—Barley is beginning to accumulate, but the market is dull. At Minneapolis—Stocks are increasing slightly, there being now 206,404 bush in store there.

OATS Toronto: Quiet; Mixed, 33c., track; White oats, west, 29c. Chicago: November, 28c.; December, 28⅝c.; May, 31⅝c.

PEAS: Toronto: Dull: Sales westward, 52c.

RYE: Toronto: Little doing. Few sales at 43c.

DOMINION MILLERS' ASSOCIATION.

REFERENCE was made in a recent CANADIAN MILLER to the fact that the Executive of the Millers' Association were giving consideration to a charge made by the Knickerbocker Company of Jackson, Mich., against various Ontario millers, for infringement of their patents on the Cyclone Dust Collector. A result of this consideration is the issuing of the following circular over the signature of A. H. Baird, President of the D. M. A.:

"The Knickerbocker Company of Jackson, Mich., who own the patents on the Cyclone Dust Collector, have, through their Solicitors, Messrs. Mabee & Gearing, Stratford, taken action for royalty and past damages for infringement against all parties who are using the Cyclone Dust Collector on which royalties have not been paid, claiming $25 on each Cyclone Dust Collector used for Middlings Purifiers or Exhausts from Rolls; $25 for each Cyclone Dust Collector used for Wheat Cleaners; $50 for each Cyclone Dust Collector used for other purposes, together with damages for the period the machine has been used in the past. By an arrangement which the Association made, through the Executive Committee, with the Knickerbocker Company, all members reporting at once to Messrs. Mabee & Gearing, Stratford, the number of Cyclones they have in use, the purposes for which they are used, and paying $20 for each Cyclone Dust Collector in use on Middlings Purifiers or Exhausts from Rolls, $30 for each Cyclone Dust Collector used for other purposes, will receive a license for the use of the Dust Collector during the remaining years of the life of the patent, and the claims for damages for past infringement will be waived on machines reported. This arrangement only extends to members of our Association, of whom Mabee & Gearing have been furnished with a full list.

"The Executive Committee would urge every member of the Association having Cyclone Dust Collectors (not made by W. & J. G. Greey, or the North American Mill Building Co., who, we understand, manufacture under license from the Knickerbocker Company) to at once carry out the above arrangement and prevent any action being entered against you and so incurring unnecessary costs, and also get the benefit of the reduction obtained by our exertions. Writs were already issued against some of our members, but further action has been stayed at our request, to give an opportunity to all our members to carry out the arrangements suggested above.

"I trust you will not delay in making a full report to Mabee & Gearing, Stratford."

THINGS TO REMEMBER ABOUT SHAFTING.

Don't buy light hangers and think that they will do well enough, when your own judgment tells you that they will spring.

Remember that shafting is turned one-sixteenth inch smaller than the normal size.

Cold-rolled and hot-rolled shafting can be obtained the full size.

The sizes of shafting vary by quarter inches up to 3½ inches.

The ordinary run of shafting is not manufactured longer than from 18 to 20 feet.

For line shafts never use any that is smaller than 1 11-16 inches in diameter, as the smallest diameters are not strong enough to withstand the strain of the belts without springing.

The economical speed of shafting for machine shops has been found to be from 125 to 150 revolutions per minute, and for wood-working shops from 200 to 300 revolutions.

A jackshaft is a shaft that is used to receive the entire power direct from the engine or other motor, which it delivers to the various main shafts.

Keep the shaftings well lined up at all times, and this will ward off a break down and avoid a waste of power.

Know that the pulleys are well balanced before they are put in position, as a pulley much out of balance is quite a sure method to throw shafting out of line.

Look at the pulleys and see that they have been bored to the size of the shaft and prevent smooth running.

If possible, apply the power to a line of shafting at or near the centre of its length, as this will enable you to use the lightest possible weight of shafting.

Hangers with adjustable boxes will be found to be the most convenient for keeping the shafting in line.

Keep your drip-cups cleaned, and do not allow them to overflow or get loose.

Have a supply of tallow in the boxes; in case of accidental heating it will melt and prevent cutting; this rule, while good for general use, applies particularly to special cases where there is a supposed liability to heating.

Never lay tools or other things on belts that are standing still, for they may be forgotton and cause a breakdown when the machinery is started.

Don't attempt to run a shaft in a box that is too large or too small, as you will waste time and fail to secure good results.

A loose collar held by a set-screw will cause the collar to stand askew, and it will cut and wear the box against which it runs.

In erecting a line of shafting, the largest sections should be placed at the point where the power is applied. The diameter can then be gradually decreased toward the extremities remote from this point.

Don't try to economize in first cost by having long distances between hanging, for a well-supported shaft will always do the best work; short shafts are surest to be straight and remain so.—American Engineer.

OLD-TIME GRIST MILLS.

IT is hardly likely that there is anything in the following sketch that is very new to some engaged in the milling trades. Their memory will take them back to such experiences as are here described. But a younger generation is growing up who know nothing of the difficulties of their fathers in milling. The advantages of to-day will be better appreciated by a knowledge of the drawbacks of the past. Besides, as Artemus Ward has said, there is some pleasure and satisfaction in reminiscencing occasionally. The sketch that follows is condensed from a paper that appeared in the New Haven Register.

"Three-quarters of a century ago," says the Register, "no neighborhood was considered to be completely equipped for the benefit of its inhabitants unless it possessed a grist mill, and if a farmer had to go more than three miles to get his grain ground into flour for his family, or the coarser cereals for the use of his swine, horses and cattle, it was thought that he was inconveniently located. In those times a brook from 3 to 10 feet in width was made to do duty wherever there was a fall of from 5 to 20 feet, by a dam being thrown across, forming a pond of from half an acre to one, six, or a dozen times as large. There would be located a grist mill generally with two runs or pairs of buhr millstones and sometimes three with which to reduce the grain grown in the neighborhood to an edible form for man and beast. If the water power thus obtained was sufficient, there was generally hard by a long, low sawmill in which, especially in the spring of the year, when the stream was at its full, the logs cut from the timber land of the farmer were transformed into boards and plank with which to build and repair the buildings of the vicinage. Of these millstones one set was usually devoted to the grinding of wheat, rye, corn and buckwheat for family use and the other run was used to grind a mixture of corn and oats into provender to feed horses and also to fatten the swine for winter consumption.

"But as the country grew, mills run by water became numerous, as they were enabled to work with greater celerity and certainty than the mills run by the wind. The miller became a man of consequence in the neighborhood. His compensation was quite liberal, as custom, which in many instances makes common law, gave him what was called a 'toll' of one-tenth or one-twelfth the grain for his compensation in turning it into flour. Thus if a farmer loaded up his ox cart with 10 bushels of rye to be made into flour for his family, the miller took one bushel of it and put it in his private bin. Indeed, some of the censorious inhabitants were wont to believe that sometimes the white-coated miller would dip his dish rather too deep into his customer's grain and many of them had a fashion for weighing the flour after it came back from the mill. Thus it was reckoned that one bushel of rye would produce 26 pounds of flour after the usual toll or wage was subtracted from the grist. And if the worthy customer happened to find that his steelyards reported but 22 or 23 pounds of flour to the bushel, the farmer simply had his opinion of that miller, and the latter was often mortified and annoyed to find that his whilom customer was patronizing a rival miller two or three miles up or down the stream as the case might be. But when it was found that the weights held out and the customer obtained what he considered his rights, then the character of the worthy miller was duly established, and he had the call of the custom far and near.

"In the old-fashioned 'Farmers' Almanack,' which always used to hang in the kitchens and sitting-rooms of our grandfathers and grandmothers, there might be found at the head of the page giving the month of January a picture of a boy skating on a mill-pond. The youth was dressed in the prevailing style of the year 1820, and his coat was almost a counterpart of the 'claw-hammer' or 'swallow-tail' worn by gentlemen at dinner parties and germans at present day. Along the road skirting the mill-pond was a piece of woods and a man in his shirt sleeves was depicted in the act of cutting down a large tree, evidently for firewood. Going along the road near by is a man driving a one-horse sled, loaded with cordwood. In the distance, at the foot of the three-acre pond, stands the inevitable grist mill, with a large overshot wheel which is the motive power that grinds the grain. Close by is an old-fashioned house with a large chimney, and there is an appearance of comfort and good living about the picture that appeals forcibly to the memory of old people who in their youthful days can remember similar scenes. The inference to be drawn from the picture is that in those days people worked for a living and that they were perhaps more industrious than their degenerate grandchildren.

"In those days the miller was easily one of the most prominent and important men in town. The mill had a certain attraction for the small boys of the neighborhood. They were never weary observing the revolutions of the big, noisy water-wheel and the rumbling gearing attached which drove the millstones. When the flour came from between the upper and nether millstones it was carried in the little tin cups of the elevator to the large bolting box, where it went through very fine netting through which a fine horse-hair could scarcely pass. When it had come down into the receiving box and was sufficiently cooled to prevent it from souring when it came into the possession of the housewife, it was dipped into the customer's bags with a clean and bright tin scoop holding three or four quarts perhaps. It was often the habit of the customer if his grist was a small one and he had two or three miles to go to mill, to wait for his grain to be ground that he might take it back home with him. Then, perhaps, he would meet there two or three of his neighbors with similar intentions and this gave them an opportunity to talk and gossip over the affairs of the neighborhood and this made the mill a sort of rendezvous to hear and impart local news and the happenings of the time. Thus it was that many political views were exchanged and if that failed why there were points of religious doctrine and belief to be discussed. And so it became an almost certainty that the miller became a man of affairs and was placed in the position of a man whose opinions were deferred to and his views treated with great respect. Perhaps there was not as much scandal afloat there as there would be in the country shoemaker's, which was another necessary not to say indispensable institution. But after all, if the miller could not tell all the news in circulation it was argued that he was either very deaf, that he had been sick for weeks or else that he had been away from home for some time past.

"The mill, as a usual thing, was generally a two-story building about 30 feet by 24. The upper story was used to store customer's grain in, and by an ingenious device it went into the lower story and into the hopper by force of gravity. The hopper was about the shape of one of the Egyptian pyramids turned upside down. It would hold three or four bushels of grain, which slowly filtered through a small orifice down into the hole in the upper millstone, where it was quickly caught by the sharp grooves in the lower stone and instantly crushed into flour; then it went through the elevators into the bolt box; then the bran was separated from the flour by the fine bolting cloth previously mentioned. This bran was used to feed the cattle, sheep and hogs of the customers. And, by the way, there is a saying, fully a century old, to the effect that 'a miller has always fat hogs and that everybody knows it,' and then the cynical and distrustful conclusion of the saying was that everybody did not know on whose grain said hogs were fed. The elevator was a leather belt about 30 feet in length running along a long wooden box about four inches across. About 15 inches apart were triangular-shaped tin cups, each holding about half a pint. But in each cup the amount was usually about a tablespoonfull. The belt ran through the long box at an angle of 15 degrees from the perpendicular and the flour cooled quite rapidly while on its way to the bolting process.

"In the location of the mill it was usually made a point to place it where teams from the highway could reach it handily. If it were placed at the foot of the falls it would necessitate a very steep road and heavy draught on the part of the customers' teams. Therefore the mill would usually be located on the bank a short distance from the stream and the water to carry it would be conveyed in a 12-inch trunk from the bulkhead to the overshot wheel, if the fall was 10 feet or more. The wheel was usually outside the mill, and to carry two run of stone was generally about 10 feet in diameter with buckets from four to five feet in length or thereabouts. If they were say three run of stone the wheel was larger proportionally. If the head of water was less than 10 feet then it was in order to have a breast wheel constructed. The difference between these wheels consisted in the fact that the water ran on the top of the overshot wheel and in the other it met the buckets about half the way down on the backside of the wheel. An overshot wheel was much more powerful than a breast wheel and in fact it would do the same amount of work that the breast wheel did with barely half the water or motive power. Where there was a large amount of water and a very little fall then an undershot wheel was used. The water ran underneath the wheel, and its running force against the paddles set it in motion. It would require four or five times the amount of water to run an undershot wheel that it would an overshot wheel, and twice as much as to run a breast wheel. To shortly describe the difference between the wheels it may be said that the overshot wheel is propelled purely by the weight of water in the buckets, the breast wheel is carried partly by the impulse of the water and the undershot almost entirely by the impulse of the water against the floats or paddles.

"In the fall of the year the miller was always expected to be very punctual in promising his grists for his customers. There were occasions when it was a treat for the farmer's family to receive from the mill the grist of buckwheat flour, which was the staple winter food for them. Very few of the farmers would forego the pleasure of eating buckwheat cakes, which, when sweetened with honey made by the busy little bees during the season when the buckwheat field is in a snowy state of blossom. It has been said by an observing individual that buckwheat is a very quick grain in all respects. It is sown in the month of June in the farmer's busiest and most hurrying season. It matures quickly and is ready to be harvested in September; being much quicker for harvest than any other grain, it must be thrashed quickly from the field and cannot be stored away like oats, wheat or rye. It is ground very soon after being gathered; it is ground very rapidly in the mill; it must be baked on the griddle in double-quick time, and last of all, it must be eaten quickly after baking and while smoking hot, for if ever there was an article of diet that is unpalatable it is a cold buckwheat cake. Even a fastidious hog has been known to turn up his nose at one that he found in his swill, and to root it out of the trough and trample it on the not over clean floor of his pen. But when the buckwheat was threshed, then the good housewife at once insisted that a few bushels must be taken to the mill to be ground as soon as possible, and when it came home and the batter was mixed and ready for the breakfast's baking, it would take one person to bake over a quick fire in order to keep six of the rest of the family eating.

"The old-fashioned grist mills with their buhr millstones, are rapidly getting to be things of the past. Those that remain are used for grinding feed for the small number of animals that the farmer of to-day keeps. It does not pay him to raise beef, for the refrigerator cars bring beeves by the thousand carcasses from the far west in from two to three days that have been fattened on the vast prairies of the west.

"The old-fashioned miller did not consider himself thoroughly skilled in his trade until he could pick the hard millstones properly. This was done by means of a sharp steel pick fastened on a handle the same as a hammer is fastened. When he was engaged in 'dressing the stones, which was necessary to be done once in the month, he had to put on a pair of huge spectacles with lenses two or three inches in diameter so as to keep the flinty particles out of his eyes. Should one of these get into the eye it would be vastly worse than a fine cinder from a coal-burning locomotive."

O, WHAT has become of the "big-yielder" bold, who pushes the yield, with his jaw uncontrolled, down, away down to a degree all untold? Has he crawled in his hole since the last time he squealed, and pulled the hole in on a 3:30 yield?

COOPERAGE D'P'T.

There is a close affinity between the work of the cooper and the business of milling. The miller is either his own cooper, having a cooperage as an adjunct to his mill, or else he rests for his supplies on an outside cooperage. The cooper in any case finds one of his best customers in the miller. The object of this department is to bring each in close touch with the other and to materially advance the interests of both trades.

TRADE REVIEW.

WE regret to say that we have no very bright news to report this month, as trade all over Canada remains very quiet. The millers are not using any large quantities of barrels, and the salt and other industries are also very quiet. We only know of very few millers who are barreling the bulk of their output, the rest of the millers using bags and sacks.

Mr. N. H. Stevens, Chatham, owing to his using the colored and grooved hoop, has had a great run, as this barrel is taking exceptionally well in the Eastern Provinces, and also answers for the West India trade. Taylor's mill, Chatham, are now also using the colored and grooved hoop, and a great many other millers are enquiring for this hoop.

There has been a radical change this year in the way that barrels are being made. Formerly all the millers in Canada used to use air-dried stock, but progressive millers are now all using kiln-dried staves and heading for their barrels and demanding hoops of the very finest quality; the consequence is that claims for re-coopering barrels do not come back with the frequency that they used to at their destinations. Although they cost the miller a little more at first, still in the end he saves money and also a great deal of annoyance as well.

The sugar refineries are running light, so that they are not consuming the quantity of stock they usually do at this time of year. It is now about the time that prices of cooperage stock advance for the winter months, but up to the present the advance has not been put in force, or do we think it will come in before the 1st of December at the latest. Cooperage stock is just the same price now that it has been for some time.

The cornmeal and oatmeal mills are running a little stronger than they have been doing, still they are not running to their full capacity; however, as the weather gets colder these mills will increase their output, which will tend to stiffen prices of cooperage stock. For carload lots of coopcrage stock the following are the present prices delivered in Toronto:

	Per net 1,000
No. 1 28½ and 30" jointed elm staves	$5 85
M. R. 28½ and 30" " "	5 50
No. 2 28½ and 30" " "	3 85
" 1 24" jointed elm staves	4 65
No. 1 5½ft. patent coiled hoops	6 05
" 1 6ft. " " "	6 65
	Per set
No. 1 17⅛" kiln dried heading	4¾c.
M. R. 19" " "	5c.
No. 2 17⅛" " "	3½c.
" 1 14" " "	4c.

For kiln dried staves the price is 25c. per 1,000 more than the above figures, and for the colored and grooved hoop the price is also 25c. per 1,000 more than the ordinary patent coiled hoop, the extra cost being for the coloring of the hoop which is done with the extract of logwood.

UNITED STATES MARKETS.

The Northwestern Miller says of the Minneapolis market: "Though there was a small decrease in the number of barrels taken by the mills last week, the figures were far from small. Nearly every shop got a fair proportion of the business. Almost one quarter of the sales consisted of mugwump barrels. The make of barrels was heavy, and even after deducting for packages shipped to outside points, several thousand were left, over the sales. Notwithstanding this, one shop has added more men to its force, while another, though employing half a dozen extra coopers, has been drawing from its storehouse. Other shops, of course, are accumulating some barrels. About 1,500 half barrels were sold last week. The mills appear to be taking barrels with fair freedom this week, and with the flour output increased somewhat, the sales are likely to be larger."

Of Chicago, the Lumberman says: "The tone of the cooperage market is materially better this week, and prices on tierces and pork barrels have advanced to $1 and 90 cents, recpectively. Reccipts of hogs are heavier than they were a week ago, and packers are disposed to buy more freely in consequence. Demand for hoops is not so urgent because of increased receipts, and prices are weaker. Hoops have been selling at $12 to $13, but it is likely that anything over $12 will hereafter be considered a good sale. Heading is coming in a trifle too freely to supply the wants of coopers, but so far there has been no trouble in disposing of all arrivals. Pork staves are not plenty, and are selling at $16 to $17. Tierce staves are arriving in fair quantities, and small lots known to exist have shown up at prices advanced. Sales are being made at $21 and $22, with a fair demand for good stock.

There is no activity in flour barrel stock.

COOPERS' CHIPS.

MR. THOMPSON, of Chatham, is putting in one of the Vale barrel machines, which turns out barrels at the rate of 40 to 50 per hour, depending on the speed of the operator, such being windlassed, crozed, chamfered, equalized, and having on two permanent end hoops. This machine is adjustable, and any size of barrel can be made upon it from 24 to 34 inches in length and from 13½ in. to 20 in. head. The principal points claimed for the machine are the way in which the staves are fed to the machine, almost in the same manner as paper is fed to a printing press. Of course, the machine had not been thoroughly tested in Canada as yet, but it has been given a fair trial in the United States, and is liked very much there. There is no reason that the machine should not be a success if kiln dried staves are used, and after it gets into thorough working order in Chatham we can say more about it.

A new pattern of barrel is being used, by some of the Minneapolis mills, in which to ship out sample lots of flour. It was designed by E. Ford, an eastern man. Its novelty consists in that it is hooped partially with half-round wire, about three-sixteenths of an inch wide. Six of these wires are distributed over the body of the package, with a hickory hoop on each chime. The Acme Bbl. Co. is getting out the barrel, paying its men 6c. for hooping off. The hoops are furnished by Mr. Ford, already for use. It is thought that the coopers, after getting used to the work, can make the barrel for about 5c. Some of the millers who have sent out the package are favorably impressed with it.

STEAM BOILER INSURANCE.

WE take pleasure in directing the attention of the owners of boilers to the advertisement of a London Boiler Inspection and Insurance Company which appears on the third page of this issue. Judging from the large number of disastrous explosions which have taken place in Canada and the United States, it is about time that steam users were awakened to the fact that an insurance company with a heavy monetary interest in the boiler and premises will see that the boiler is in a safe condition, and that the man in charge of the engine is capable and trustworthy. It is better that the responsibility should be assumed by a company that has a staff of trained engineers, than by the owner of the boiler, who, except in a few cases, is not capable of judging of the condition of his steam plant. Within the last two weeks there were four explosions of steam boilers in Canada, all of which resulted fatally to those in charge of and in the immediate vicinity of the boilers, to say nothing about the loss through damage of the property. The subject of boiler inspection is receiving more consideration to-day than it has for a long time.

LEADS THE WORLD.

THE Magnolia Metal Company, having offices at New York, Chicago, London and all over the world, has been allotted the highest award possible at the World's Fair, Chicago, on their Magnolia Metal. A medal has been granted and a diploma with following specifications allowed and set forth:

1—It prevents hot boxes. 2—It will not cut or heat journals. 3—Its lasting qualities are of the highest order. 4—It is a self-lubricating metal, saving large percentage of oil. 5—It increases the motive power. 6—It is the only metal that protects and does not wear journals. It enamels them. 7—It is adapted to high and low speed machinery. 8—It will stand the heavy work of sugar, rolling, saw and wire mills. 9—It is a success for main journal and crank-pin bearings; also, gibs of steamships and steam tugs. 10—It is the best water metal.

FAIR WARNING.

IN these days of few dust explosions, millers should not grow careless. The time for night work in all mills is now at hand, and more artificial lights should be used in a mill, and by keeping them out the risk of danger from this source is greatly reduced. The most destructive dust explosion that has occurred in Europe for many years occurred in a flour mill at Hesperingen, Luxembourg, recently. It was followed immediately by fire, and the plant was completely consumed. Several died from injuries received, and others were badly injured.

PUBLICATIONS.

FROM out of the large number of trade journals, that reach this office, English, American and Canadian, we can easily give the special Fall number of the Canadian Grocer, published by the J. B. McLean Publishing Co., of Toronto, a foremost place. The lithographed cover is handsome, whilst the letterpress and illustrations reflect great credit on printer and engraver. The contents are specially suited to the trades represented, and embrace a wide range of topics, telling of the painstaking care and ability of the editor.

STEAM PUMPS

NORTHEY MFG. CO. LTD. N E TRADE MARK

Duplex

AND SINGLE

Steam

AND POWER

Pumps

If you require a pump for any duty, of the latest and most improved pattern, and at close prices,

WRITE US

NORTHEY

M'FG CO.

LIMITED

TORONTO - ONT.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 27th of each month to insure insertion in the following issue.

MILLER WANTED

WANTED, A GOOD MILLER TO MANAGE a 75 barrel mill. Must be competent man and single. Address

A. LAPOINTE,
St. Justine de Newton, Que.

SITUATION WANTED

BY MILLER, 4½ YEARS' EXPERIENCE. Young, single, industrious and strictly temperate. Uses no tobacco in any way. Best of references. State wages when writing. Good mill. Address:

JNO. FORD, JR., Markdale, Ont.

FOR SALE.

A LIMITED QUANTITY OF HICKORY half-round hoops, suitable for barrels for the West India trade. Inquire of

JOHN CAMPBELL,
Erie Mills,
St. Thomas, Ont.

FOR SALE

BUCK WHEAT FLOUR MACHINERY, ONLY run two years, reason for selling, want of room. Machinery can be seen running. Will take buck wheat flour in payment.

Apply to

JOHN MACKAY,
Caledonian Mills,
Bowmanville.

FOR SALE

ONE DOUBLE SET, 9x18 in. ROLLS, (Greey's make).
One Double Set, 9x18 in. Rolls, (Goldie & McCulloch make).
Two Inter-Elevator Flour Bolts, 8 feet by 33 inch cylinder.
Two Round Scalpers, 3 feet by 20 inch cylinder.
One Purifier, No. 1 (Barter make).
One Eureka Smut Machine, No. 1.
One Oat Separator, No. 1.
One 36 inch Water Wheel (Leffel), and a quantity of Shafts, Pulleys and Gears.

The above machinery is as good as new, and will be sold cheap, for cash. Apply

DOBSON & CAMPBELL,
Beaverton, Ont.

FOR SALE

I OFFER A SEVENTY-FIVE BARREL ROLLER mill, very best modern machinery, engine and boiler complete, in best hard wheat region in the United States. Railroad point, near Manitoba boundary, and largely settled with Canadians. Excellent chance. I own by accident, and sell because not a miller. Terms easy.

C. M. HERTIG,
Box 382, Minneapolis, Minn.

TO MILLERS

FOR SALE

"NATIONAL ROLLER MILLS," BRUSSELS, Ont.; capacity 100 barrels per day. Cheap, easy terms of payment. Address

"B.C.," P.O. Box 566, Toronto.

ARE YOU INTERESTED IN LUMBER?

SCRIBNER'S LUMBER AND LOG BOOK

Is invaluable to any who have occasion to measure lumber, cast up measurements of timber of any shape, and to farmers and mechanics, without any exception.

THE TABLE ON STAVE AND HEADING BOLTS

and the table for casting up price per cord for these is a great saver of time, and always accurate.

Over a million copies have been sold. Post paid to any address on receipt of 35 cents.

Address,

A. G. MORTIMER,
Toronto, Can.

MILLERS' & MANUFACTURERS' INS. CO.

ESTABLISHED - 1885

32 Church Street, Toronto

The President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said: I have much pleasure in drawing your attention to the fact that this company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

Up to the present time the insurers with this company have made a saving, when compared with the curreent exacted rates, of $91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to $21,522.72.

Besides achieving such result, we now also have, over all liabilities—including a re-insurance reserved (based on the Government standard of 50 per cent.—(50%), a cash surplus of 1.93 per cent. to the amount of risk in force.

Such results emphasize more strongly than any words I could add the very gratifying position this company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report.

The report was adopted, and the retiring Directors unanimously re-elected. The Board of Directors is now constituted as follows: James Goldie, Guelph, president; W. H. Howland, Toronto, vice-president; H. N. Baird, Toronto; Wm. Bell, Guelph; Hugh McCulloch, Galt; S. Neelon, St. Catharines George Pattinson, Preston; W. H. Story, Acton; J. L. Spink, Toronto; A. Watts, Brantford; W. Wilson, Toronto.

HUGH SCOTT, Mgr. and Sec'y. THOS. WALMSLEY, Treasurer

THOMAS McLAUGHLIN

FLOUR

— AND —

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210 BOARD OF TRADE BUILDING

TORONTO

EASTERN AGENCY:

50 St. Paul Street

QUEBEC

Mineral Wool Pipe and Boiler Covering

If you want to save fuel . . . . . USE
" " " dry steam at long distance . . MINERAL WOOL
" " to prevent condensation . . . SECTIONAL
" " " " cold water pipes from dripping COVERING
" " " " " " freezing

THE best non-conductor is the cheapest covering. Mineral Wool heads the list as a fire-proof non-conductor. Hard pressed coverings are poor non-conductors, and are therefore the most expensive in the end.

A good pipe covering is one of your best investments. It is false economy to have uncovered pipes, as you are just paying the coal man what the covering man should have, and only ashes to shew for it. Give the matter your consideration, it means money to you.

We also carry full lines of Asbestos Goods, and Mineral Wool for fire-proofing, deadening of sound, insulation, etc., etc. Send for Pamphlet.

CANADIAN MINERAL WOOL CO. LTD., - 126 BAY ST., TORONTO

EMBRO OATMEAL MILLS

ROLLED OATS

STANDARD AND

GRANULATED OATMEAL

Made from Selected White Oats

SPECIAL TERMS MADE WITH FLOUR MILLERS FOR RE-SHIPMENT WITH CARLOAD FLOUR

D. R. ROSS, Embro, Ont.

Chatham Wired Hoop Co., Ltd.

Owner of the Patents for the Dominion of Canada

IS now issuing Licenses for the use of wooden barrel hoops with reinforcing metal band commonly called "the wired hoop." These hoops are specially serviceable for high grade cooperage, requiring strength and tightness, such as flour, meal, cement, etc.

— ADDRESS COMMUNICATIONS TO —

CHATHAM WIRED HOOP COMPANY, LIMITED, - - - CHATHAM, ONT.

Peer & Company

Flour and Grain Merchants

BOARD OF TRADE BUILDING

TORONTO

ESTABLISHED 1859

WM. GALBRAITH

Commission Merchant

Flour and Grain

48 Front Street E.

TORONTO

DID YOU KNOW IT?

Messrs. Dominion Dry Kiln Co.,
Toronto, Ont.

Gentlemen,

We have thoroughly tested the "Andrews" Lumber Dry Kiln furnished by you and must say that it more than surpasses our expectations. We put green spruce lumber in from the saw dripping with water and in 18 hours it was drier than lumber that had been stuck up in the yard all summer, and in four days it was as dry as a bone, and without nearly as many checks or warps as the same grade air dried.

A very important feature of the "Andrews" Kiln is that it saves so much steam over that of any other system.

You may refer any one you like to us, or send them down to inspect, and we can satisfy them that your kiln cannot be beat.

Yours truly,
EASTMAN LUMBER CO.

WHAT?

WHY

Chatham, Ont.,
August 25th, 1893.

A. G, Mortimer, Esq..
Manager Dominion Dry Kiln Co.,
Toronto, Ont.

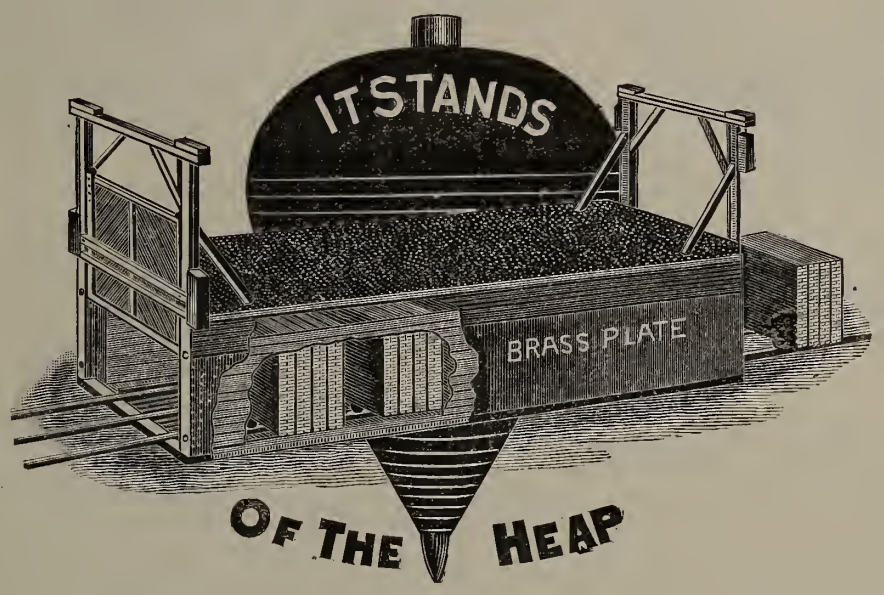
Dear Sir,

The "Andrews" dry kiln, which I purchased from you has now been in operation over a month, and is so perfectly satisfactory that I cannot say enough in its favor.

I use very little steam and my staves come out as dry as a bone, and are not in any way injured by warping or discoloration.

Yours truly,
(Signed) N. H. STEVENS

AWARDED
THE
GOLD
MEDAL



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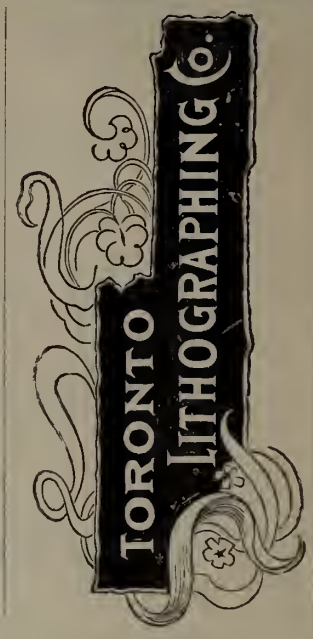

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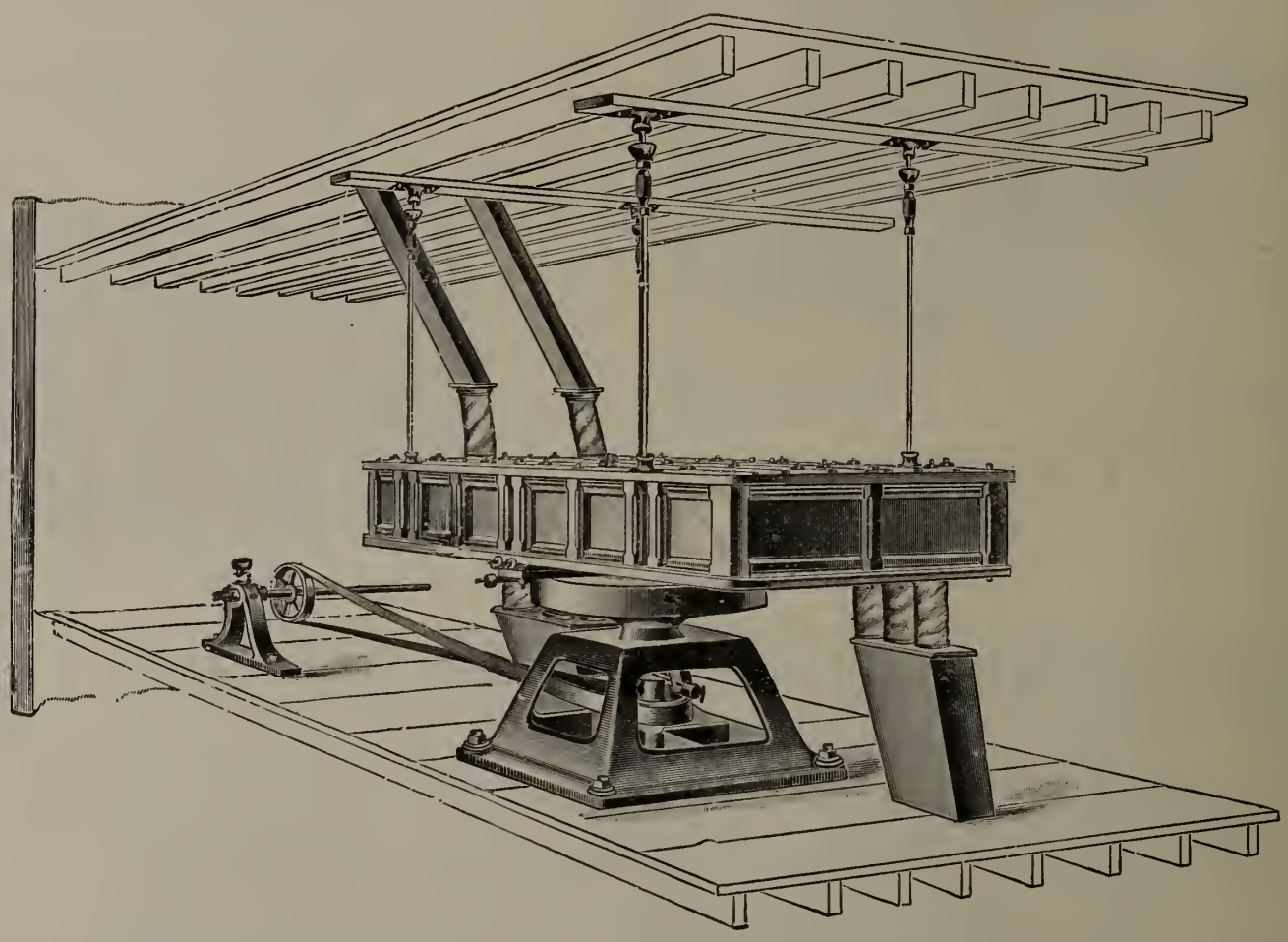

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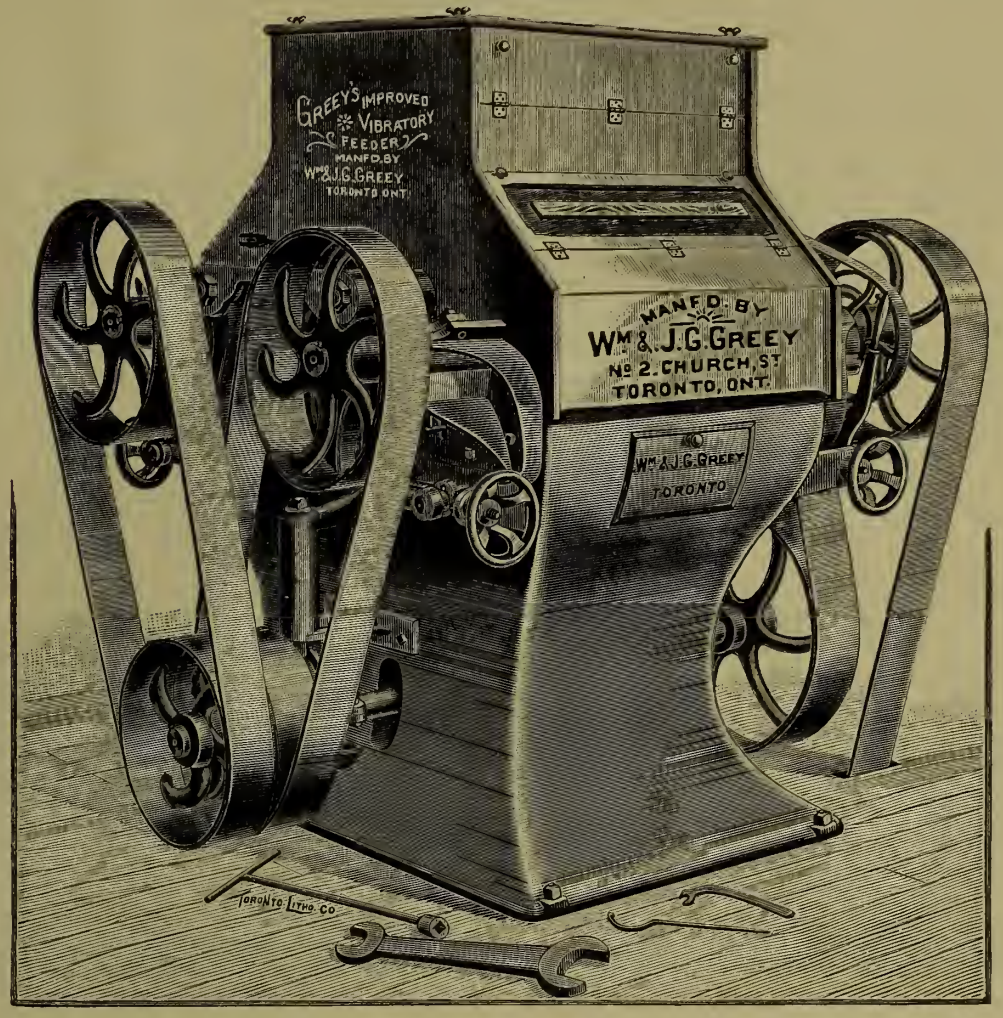

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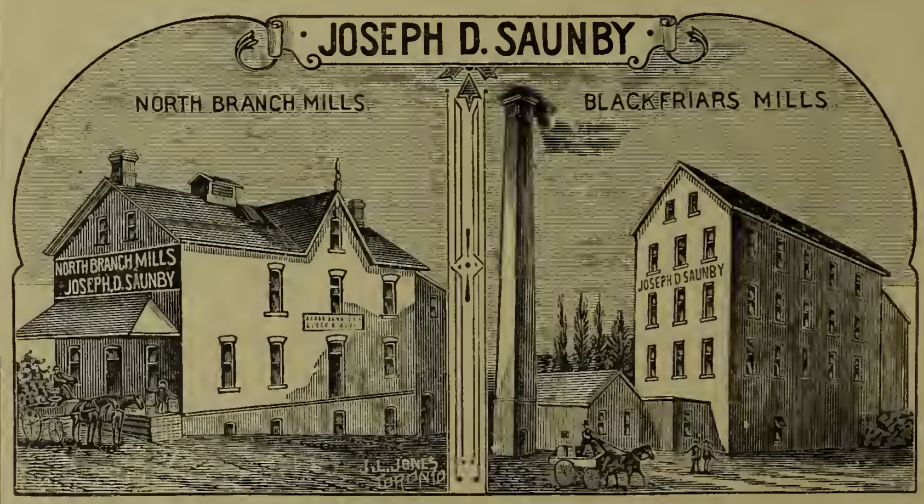

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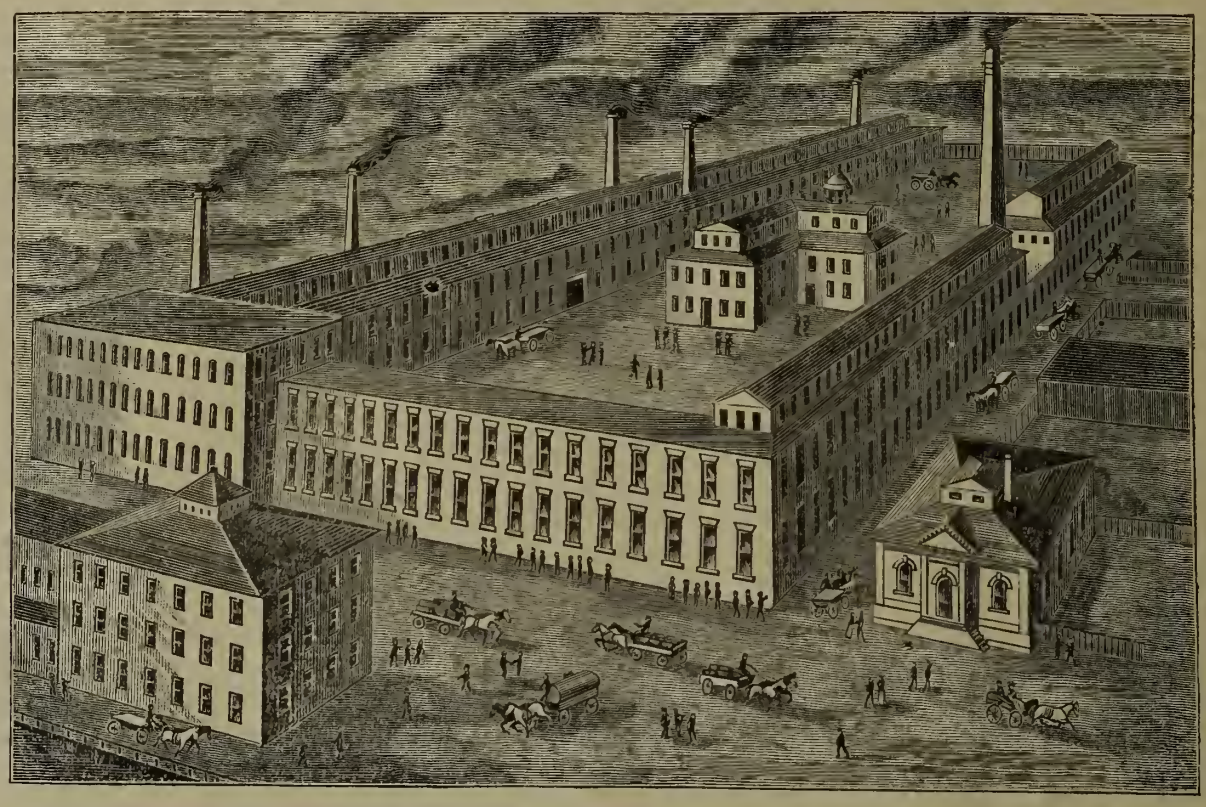

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Old Series, Vol. XI. } Number 12. TORONTO, ONT., DECEMBER, 1893 { Terms, $1.00 Per Year
New Series, Vol. III. } { Single Copies, 10 Cents

PEN PICTURE OF YE MILLER.

A YEAR ago in the special Christmas issue of the CANADIAN MILLER we devoted a page to the subject of the "Miller in Literature.". Mr. M. G. Watkins in a late number of the Gentleman's Magazine writes an interesting paper on "Mills and Millers" in which he paints the following picture of ye miller. From the literary point of view, though the miller of to-day is another man to the miller of yesterday, we have no doubt our readers will appreciate the picture. Here it is :—

"The miller himself, both in real life and literature, possesses a two-fold character. He is either a rogue, like Chaucer's miller, Simkin,

> A thefe he was forsooth of corn and mele,
> And that a slie and unsant for to stele;

or a good natured, easy-going man, such as Tennyson has portrayed :

> His double chin, his portly size,
> And who that new him could forget
> The busy wrinkles round his eyes?
> The slow, wise smile that, round about
> His dusty forehead, drily curled,
> Seemed half within and half without,
> And full of dealings with the world.

Among tradesmen of a philosophical character, such as cobblers and fishing-rod makers, millers hold a high place. They are always democratic in their views, as being wont to grind all that comes into dust, and to see all their neighbors compelled to resort to them for the staff of life. Their pigs, too, are always fat, and thereby hang dark tales. The gossip of the country side is well-known to them, and fitly enough their tongue "clappeth as a mill." Doubtless there is some alloy in their cup of prosperous happiness. Virgil alludes to the weevil, which is not unknown in modern flour at times. Sometimes, again, the water mill is blocked by ice, and not a breath of air blows to turn the windmill's sails. Millers' wives, too, are often shrews, why is not very apparent, and they live in daily fear of their children being drowned in the dam or killed by the rushing sails. Foreign exportations also convulse the corn market, so that a miller's life is not uniformly to be coveted. A peck of troubles invariably accrues from the numbers who wish to fish in the milldam and pit. Naturally he likes to catch his own eels, nor he has no objection to allow a few to throw the fly on his water. But strangers will trespass, tread down his meadow and break down his hedges, and then his temper is apt to be short.

Unluckily, he fares ill in proverbial literature. "An honest miller hath a golden thumb." The Scotch, with their pawky humor, are never tired of girding at him—"'It's gude to be merry and wise,' quo' the miller, when he moutered twice" (i.e. twice took his customary payment); and again, "The miller mouters best wi' his ain hand;" while "to drown the miller" —a heinous sin in Scotland—implies putting too much water into a glass of spirits. "Every miller draws water to his own mill," points to his selfishness. The miller's wife partakes in her husband's failings. "Do," says another proverb, "as the miller's wife of Newlands did; she took what she had and she never wanted." She probably gossips a good deal, for "mealy-mou'd maidens stand long at the mill." Even the miller's dog is sharper than most of his kin, "the miller's dog licks his lips ere the pock be opened." It is worth remembering that "the lower millstone grinds as well as the upper." "To be trusted with a house full of unbored millstones," implies considerable distrust. Proverbial lore is much struck with the noise of a mill. "To be born in a mill" is a synonym for being deaf; while "in vain doth the mill clack if the miller his hearing lack." It is not quite apparent to one who does not belong to the trade what can be the meaning of "The horse next the mill carries all the grist."

THE LIMITATION OF ENGINE SPEED.

THE practical limitation to high rotative speed in stationary reciprocating steam engines, says wariter in Cassier's Magazine, is not found in the danger of heating or of excessive wear. The cause of both these, it is now well understood, is to be looked for in defects of design or construction, commonly of both, as they generally go together, and where these do not exist to a degree which is of practical moment, a bar to the proper employment of higher rotative speed appears long before a tendency to heat or wear is to be observed. Correct designs are now generally followed, in both the fixed and the moving parts of steam engines, and a high degree of truth is readily attained in their construction, so that it has come to be a simple matter to make engines which can be run at a very high speed quite free from either of these difficulties.

Contrary to the general belief, no objection to very rapid rotation is afforded by the development of centrifugal force in the fly-wheel or band-wheel. The wheel of high-speed engines have generally solid rims, and no case of their bursting has, I believe, ever been known. Disasters from this cause have been confined to engines not designed to be run at high speed, and have sometimes occurred when the speed was only slightly accelerated above the normal rate. In these cases the wheels have been built in segments, with surprising disregard of necessary strength in the flanges and bolts by which the segments were held together.

Again, an objection to very high speed is not found in a tendency to knock on the centers. In a properly designed and constructed engine, in which the valves are correctly set, and which is run by steam, high speed tends to silent running. Noise from bad design or bad work, from insufficient lead given to the valves, and from water in the cylinder, is excluded from consideration. It is admitted, with pride, that the bad consequences of these defects are aggravated by high speed. This revelation of them has wrought an entire change in engine construction, not yet completed, and even makers of slower speed engines have largely profited by it. But it is obvious that there is no excuse for their existence. The only legitimate cause of knock on the centers is loose boxes, and knock from this cause is softened as the speed is increased, and at extremely high speed will disappear entirely, owing to the force of the steam at these points being absorbed in overcoming the inertia of the reciprocating parts.

Vibration is not an objection to very high speed, because it is an easy matter to so design and construct an engine and balance the running parts that it shall be free from vibration at any speed whatever. Again, very high speed is not objectionable, per se. If an engine runs in silence, completely free from vibration, without any tendency to warm, and without wear of any running part, its very speed renders it an object of special admiration, even to those to whom such speed is new. Whenever extremely high speed in a steam engine has caused any other feeling in the beholder than that of admiration, it has always been the case that it has been attended with something annoying, a noise, or a jar, or some uncomfortable action which ought not to have existed.

All this being true, there still remain two considerations of a controlling nature, which require that the rotative speed of engines shall be kept within moderate limits. The first of these is, that engines ought not to be run as fast as they can be. It must, on reflection, be obvious to every one that an engine should be capable of running, and that, too, with entire satisfaction, so far as its motion is concerned, a great deal faster than it is run. This is the solid ground of security and confidence. It means peace and comfort, and helps to make men sleep well o' nights. It means long life to both engine and builder.

The second objection to the employment of extremely high speed is a very serious one indeed. It is the large amount of waste room in the port, which is required for proper steam distribution. It is in the important respect of economy of steam, the high-speed engine has thus far proved a failure. Large gain was looked for from high speed, because the loss by condensation on a given surface would be divided into a greater weight of steam, but this expectation has not been realized. Far from it. The performance of this class of engines shows, instead, a positive, and in some cases a large loss in economy. For this unsatisfactory result we have to lay the blame chiefly on the excessive amount of waste room. It has already been pointed out by Mr. Harris Tabor that the ordinary method of expressing the amount of waste room, in the percentage added by it to the total piston displacement, is a misleading one. It should be expressed as the percentage which it adds to the length of steam admission, and then every one would see what a serious thing it is. For example, if the steam is cut off at one-fifth of the stroke, eight per cent. added by the waste room to the total piston displacement means forty per cent. added to the volume of steam admitted. Under these circumstances it is obviously the duty, and for the interest, of builders of high-speed engines to adopt every expedient for reducing the amount of waste room that can be done consistently with proper admission and discharge of the steam. For this, the first requisite are modern piston speed and longer stroke.

Engines of four, five and six-foot stroke may properly be run at from 700 to 800 feet of piston travel per minute, but for ordinary sizes I would recommend and urge that 600 feet per minute be taken as the limit of piston travel, under all circumstances. This will give from 300 revolutions per minute with twelve inches stroke to 100 revolutions per minute with six inches stroke, with which purchasers ought to be satisfied.

I would ask builders, in their own interest, to resist the temptation to get the utmost out of a given engine, and to set their faces like a flint against the demand for short-stroke engines, which shall occupy but little room, and from which the required power can be got by speeding up beyond the limit here proposed.

PRESENT METHODS OF CLEANING WHEAT.

"WHY has not some mechanical genius," says a writer in the Roller Miller, "armed with the javelin of perseverance, marched forth to do battle and win laurels in this particular line as well as in others? The reward would surely be liberal enough to warrant the outlay, judging from the prices paid for some mechanical monstrosities that have been brought forth in the last decade or two. One of these, I well remember, was a stone decorticator that sold at from $600 to $100, according to size, and was of no earthly use whatever, except to abrade and weaken the bran, thereby causing the miller a continual chase after the red dog which was so often found nestling in his flour. This same dog, or some cur akin to him, is still to be found in mills where harsh scouring is in vogue.

"I think that the reason why there has not been as much advancement in the grain-cleaning line as in other lines is due largely to the fact that there are only a few manufacturers of cleaning machinery in the country (if my memory serves me right, only three or four of any importance), while in nearly all other lines are dozens of manufacturers striving to push their machines to the front, and continually on the alert for ideas that are new and novel. And it goes without saying, that fine mechanical minds must be behind them, for improvements do not often come by chance, though some are stumbled on.

"There has been no very radical change in the system of wheat cleaning for the past 25 years or more. But what the future may have in store for us is hard to tell, although I have noticed by late files of the Patent-Office Gazette that some novelties in this line have recently been patented. Notable among these are a couple of continuous air-current, self-contained machines, which look as if they might work. Of course, self-contained machines are not of much recent date as to cause much movement; but their application to grain-scouring is quite a novel idea. What a great boon it would be if a thoroughly practical machine of this kind could be gotten up. But can it be done? Ah, there's the rub! In the language of the immortal William, I would say: "If it were done when 'tis done, then 't were well it were done quickly:" for, even if they should do no better work than the machines now in use, their cleanliness would insure their adoption.

"Almost every other branch of the milling business has undergone a wonderful change in the last few years. Buhrs, which were once the very poetry of motion, and considered almost as stepping-stones to advanced civilization, are things of the past, and are now often used as stepping-stones to many a mill's back door. The hexagonal reel has lost its prestige and been relegated to the darksome garret of the old mill, while in its places are novelties innumerable. Air-currents have been called into requisition to aid in the purification of flour, with marked success, and the wheezy old dust house, once a necessary adjunct to nearly every mill, and which for years has blown forth its blighting blast, polluting the neighborhood with its filth, has about breathed its last, and will soon be forgotten. Again I ask, why have we not had some new ideas advanced in grain cleaners?"

WE have a notion that the man is about right who said: "Luck is ever waiting for something to turn up; labor turns things up for itself."

THE THREE-SKINNED THEORY OF WHEAT.

IN the October MILLER we reprinted from the London, Eng., Miller, a dissertation by one "Jackstick," giving from the writer's point of view a description of the structure and physiology of a grain of wheat. Prof. W. A. Thoms, in a later Miller, criticises "Jackstick" position somewhat severely. He views with considerable scepticism the three-skinned theory of wheat bran, as promulgated by "Jackstick." He says: "I can not agree with this theory, which it is claimed photo-micrographs demonstrate. The demonstration I rely on is dissection, under low micro objectives and medium high eye-pieces, of the tissues of the ovule or floret (not berry), before and after fertilization. Before fertilization I make out five distinct tissues and after fertilization only four tissues. 1. The colorless epidermis, consisting of three distinct separable tissues. 2. The green-colored tissue, consisting of elongated cells filled with green chlorophyl corpuscles, which I call the algoid tissue, and regard all the rest of the colorless tissues of the plant as fungold and parasitic on the algeo. 3. The color tissue proper of the mature grain, more or less red, or without color, or a faint yellow, dividing varieties of wheat into red, white and amber. Below this tissue there is another, colorless, the testa, but both may rank one. 4. The cerealine tissue which "Jackstick" might have credited to M. Mege Mouries as the authority for the description of it. 5. The tissue is inside of the cerealine tissue. At the time of fertilization the fifth tissue breaks down wholly or in part, and the free nuclei of the broken-down cells develop into the sacs of the endosperm. This view was held by the late Prof. Burns and described in a milling contemporary. It is correct, I have proved it. The same is true as to the information of the pollen of wheat. The inner tissue of the anthers break down and the nuclei form into pollen grains.

"The statement that "the development of the wheat berry after fertilization consists in the formation of starch, then gluten, and lastly cerealine," is erroneous. Proteids are first formed, to enable the free nuclei of the fifth broken-down tissue to develop into the large sacs of the endosperm. As these sacs grow, new nuclei arise within reach of them. These nuclei are seen to contain minute round bodies: these are amyloplasts and at this stage consist of pure protoplasm. The amyloplasts grow until they burst the nuclus or parent cell, and are free in the large endosperm sac. Here they grow fast and, acquiring a cellulose skin, convert their protoplasm into starch. The gluten, in the form of a single large amœboid body, is forming at the same time. The cerealine is formed simultaneously with the endosperm, and the cerealine cells increase by sub-division with the increase of the endosperm. This increase of cerealine cells and cerealine continues until the bran tissues are ripe and stiff, which is before the sugar and nitrogeneous amides have ceased to be deposited in the endosperm, to be re-formed there into starch and gluten-proteids. Hence there is less cerealine in proportion to endosperm in dead-ripe grain than in grain cut before it is ripe. "Jackstick" states the direct contrary. "The farmer," he tells us, "chooses the time for cutting his wheat so as to have the most gluten and the least amount of cerealine as possible." Does the reader know a farmer who so reasons? I do not. "Jackstick's" farmer's "reasons for this is that, after the gluten has become developed, the stage for producing the 'destructive element' sets in, and the wheat is cut before it is ripe in order that the 'destructive elements' (cerealine) may not increase too fast." All of which I regard as mere imagination, as is his description of the endosperm of wheat. It "consists," he says, "of gluten walls, between which is packed starch; the gluten is arranged in a fine network which extends to the center of the berry." The gluten walls and networks he refers to are the cellulose walls of the endosperm sacs. The protoplasm of each sac, on which starch is lying, is the gluten, but it is not in the form of network, unless the cut and moist section, examined under a microscope, has been moved about and the gluten pulled and twisted into filaments. The photo-micrographs which illustrate "Jackstick's" article show a network of cellulose walls, not gluten."

"PATENT" FLOUR DESCRIBED.

WRITING on "patent flour" in the Mechanical News, Mr. R. James Abernathey says: Outside the circles of the industry but very few people understand what is meant by "patent" flour, although all, or nearly all, are familiar with the name and also the flour. Many suppose that the flour was originally patented, and hence the name. That is not true, as no patent has ever been taken out on that kind of flour or on any other kind, so far as is known to the writer. Attempts have been made to patent processes of making flour, but none have proved entirely successful.

The so-called patent flour is made of what is known as the "middlings," a necessary product in the reduction of wheat to flour. Formerly the middlings were very objectionable to millers, because of the impurities contained in them, and all efforts were directed against their production or to reduce it to a minimum, because the flour made therefrom was of an inferior grade compared with the flour of the first grinding. Such was substantially the status of the flour-making industry in that respect, some twenty odd years ago, when the purifier, a machine for separating the impurities from the middlings, was introduced and, like all other machines, patented. So novel was it at that time to have a really new and patented device in a flour mill that the middlings flour was hereafter miscalled patent flour, because the stock was dressed on patented machinery. Such in a very small nut-shell is the history of patent flour.

It is not so much in the chronology of patent flour that interest now centers as in its effects upon the industry. As stated, middlings making is to an extent the necessary result of flour making, as by no known process can flour be made without producing a greater or less middlings, depending on the character of the wheat, whether it be hard or soft, soft wheat making the least, and hard wheat the greatest quantity. The invention of the purifier would have been of inestimable and lasting value to the flour-making industries, had a logical, conservative and legitimate course been followed by the flour-makers by running their mills for the original purpose of making flour, as had always been done, and used the purifier for dressing the necessary middlings product only, or at least not more than a reasonable average product; but they did not. On the contrary, so elated were all at the marvelous change in the middlings flour and the commercial importance that it immediately assumed, that a desire seized the hearts of all largely and, of course, illegitimately to increase the quantity. The result was that flour-making as a primal factor was abandoned, and middlings making took its place.

While grinding with stones, middlings making could not be pushed to the desired limits, especially with soft wheat, nor yet with hard wheat, although the hard-wheat (spring-wheat) millers had much the best of it. Before this important change was made, spring-wheat flour regularly took its position in the rear on the line of commercial values, whereas immediately after it took the lead, to the great astonishment and consternation of winter-wheat millers. The buhrs, not coming up to the requirements of middlings making, were supplanted by rolls, and thus the struggle to increase the middlings output was renewed with increased energy and determination; and to such an extent has the matter been pushed that the quantity of middlings flour made in mills, the products of which follow the channels of commerce and seek a market in the great marts of trade, is now about two-thirds of the whole, against less than one-third in former years.

The result of this illegitimate practice is that the remaining one-third has been so deteriorated in quality as to have no commercial standing and is a constant source of loss to the makers. The relative value of the one-third of lower grade flour is less now than was the relative value of the one-third or less of middlings flour a quarter of a century ago, and, therefore, the condition of the flour-making trade is much worse now than then. It is in reality a "condition and not a theory" that confronts the flour-makers to-day. One or two courses must be pursued. They must either discover a means for purifying and bringing the one-third of low quality up to about the standard of high grade, or reverse methods and go back to the first principle of flour-making, regardless of middlings making. One or the other is inevitable, and the sooner the gravity of the situation is realized, the better will it be for the trade.

BOILER EXPLOSIONS.

By. E. W. LOCKWOOD, IN "TRADESMAN."

THE fundamental cause of explosion in steam boilers when traced to its origin is most generally found to be the result of foul and dirty boilers. By reason of mud, sediment and scale, the engineer is unable to properly secure the results desired, he must consequently force things, and as a result the shell of the boiler is overheated, expansion causes scale to give way, and the water striking the overheated plates creates a reaction which suddenly produces a strain upon the boiler. Something must give way and an explosion is the result. All this is due to the fact that the boilers were foul and in an unfit condition to do the work required of them. I lay down as a text this one fact: keep your boilers clean and you will have overcome the primary cause of explosions.

The world is constantly securing the results of brain energy of thinking men; improvements are daily being made; there is a constant and steady advance along the whole line of mechanical construction, which in the past decade has been so great that it is almost impossible to enumerate. Those improvements and inventions which have secured the most satisfactory results have been the simplest in construction and operation, and comparatively inexpensive to the user when the risk and loss of time are fairly considered.

One of the simplest in construction and operation for use in steam boilers, and the only one which will keep steam boilers absolutely clean and furnish pure water, has passed beyond the era of experiment and is an accomplished and recognized fact, and is the only appliance in the world which does and will do complete work to this end. Such an appliance is of inestimable value to the engineer, as it enables him to have complete control of his boiler and secure from it the best results possible and that without risk or danger.

The boiler being kept clean gives to the engineer a sense of security which he can never feel when operating foul and dirty boilers, and the time is not far distant when the demand for security from loss and risking of lives of engineers will become so strong that the proprietor of any establishment, who, from a miserable parsimoniousness, shall fail to have the life of his engineer properly protected in this and all other directions, will be looked upon by all right-thinking citizens as a criminal, and I am much mistaken if he shall not be so considered under the law.

TO COVER SUCTION PIPES.

IT is a very good plan to cover the end of the suction pipes to pumps or injectors, and, in fact, it is very necessary in most cases, unless the water is very clear, as it does not take much to clog up an injector, especially a small one. But do not make the mistake of putting a flat screen over the end of the pipe, as this does not give opening enough for the water to flow through. This must be very plain when we think the wires of which the screen is made occupy a portion of the space that the pipe covers, and, besides this, there is the friction of the water passing through the numerous holes through the screen, which is considerable if the water is passing at a great velocity. To be sure, at slow speed the friction may not be noticeable, but as the speed or velocity increases, it is very noticeable and must be taken account of or trouble will ensue from not having sufficient water for your pump or injector. The best form of a screen in a place of this kind, and the one recommended by injector makers, and others in similar business, consists really in a hemisphere of brass wire netting, the diameter of which is the same as the pipe which it covers. This makes a very cheap screen and one which gives a good margin for the friction of the water and for the clogging up of the holes in the screen by floating particles of dirt in the water.

VIEWS AND INTERVIEWS.

Sweeping Out a Flour Mill.

A writer in the St. Louis Miller gives some advice to milling apprentices, wherein he remarks that as those commencing to learn flour milling begin usually to sweep only, even here there is ample scope for those who possess real intelligence. Thus having remarked that the first great qualities in the make up of successful millers are observation, application, industry, continuity and economy, he goes on to observe a boy who is too trifling to do a good job in sweeping, will never make a good miller, and then particularising, the same writer observes—you notice a collection of black dirt on the floor underneath gear wheels. On looking at it closely you find it to be cast iron cuttings from the above wheels, you know it is not right, you report it to the miller on watch, the trouble is corrected, and you get to see how it is done. And from that time on you rise in the estimation of the miller, he knowing that on whatever floor you may be, and whatever you may be doing, that you are on the alert to prevent trouble and help run the mill. It is the old story of whatever is worth doing at all is worth doing well. And the lesson is one no boy should forget.

Skimmed-Milk Flour.

Take the cream off an article and the residuum becomes of a skimmed-milk character. So we remark sometimes, referring to the work of another, that he has taken the cream of the job. Speaking of the lowering of the standards of spring wheat by making 75 per cent. patents, a practice common enough among millers in some of the Northwestern States, and methinks elsewhere too, a jobber has said: "Flour is like milk: there is only a certain proportion of cream in it, and the closer it is skimmed, the poorer is the cream, as well as is the milk that is left. The patents are the cream, and the bakers' extra the skimmed milk. Formerly only 40 per cent. patents was taken off, which was full cream, leaving a good strong extra, both of which became favorites in the trade, the former for home use, the latter for export. But since the custom of taking 75 per cent. patents became so general, the extras are no longer a favorite export grade, except at a very low price, as they have neither strength nor color, while the home trade are largely going off the spring patents on to straight winters or blended patents, because such a large proportion of the former are milled so fine to give color to the middlings now left in patents that they also lack strength and color, and neither make good bread nor pastry. It is extremely difficult to get good spring patents any more."

Bleeding Bread.

Says the London, England, Bakers' Times: A curious phenomenon known as "Bleeding Bread" appeared in England during the recent hot summer. In the old days this would have been regarded as a portent of evil, but we have changed all that, and the matter has been investigated, and the ghost finally laid by Dr. M. C. Cooke. The earliest scientific account of "bleeding bread" is dated 1819. A peasant of Liguara, near Padua, was terrified by the sight of blood stains scattered over some polenta which had been made and shut up in a cupboard on the previous evening. Next day similar patches appeared on the bread, meat and other articles of food placed in the same cupboard. It was regarded as a miracle, until the "blood stains" were shown to a naturalist, who recognized the presence of a microscopic plant. In 1848 Ehrenberg saw the same object and referred it to the animal kingdom under the name of Monas prodigiosa. In the same year Montague saw it on cooked fowls and vegetables. He regarded it as an algoid, and gave it the name of Palmella prodigiosa. The first record of its appearance in Great Britain was Bristol in 1853, when Mr. Berkeley, the authority to whom it was submitted, regarded it as a fungus. Under a simple lens the Bristol plant appeared "to consist of a gelatinous substratum of a pale red, bearing an upper layer of a vivid red hue, having an uneven or papillated surface." The microscope showed this stratum to consist of, generally, globose cells immersed in or connected by mucilaginous or gelatinous matter. It propagated itself by spurting a jet of red particles, and by this method the extraordinary rapidity with which a large surface became covered was explained. About 1886 an epidemic of "bleeding bread" appeared on the continent. Pieces of cooked meat presented a singular carmine-red coloration. These phenomena prevailed regularly for a period of three months and then, coincidently with a sudden and considerable fall in the temperature, ceased and did not reappear. In spite of the frequent appearances of "bleeding bread" naturalists are not of one mind as to the precise name and class of the organism. According to some it is Micrococcus prodigiosus, while others regard it as Bacillus prodigiosus. Is it not possible that some of the bleeding relics which aroused the wonder of the Middle Ages were due to this organism?

HEATING BY EXHAUST STEAM.

THE idea is very prevalent that it is expensive to heat a mill or factory by exhaust steam, says a paper devoted to steam matters. By this we mean that many mill owners, superintendents and shop hands believe this to be true, and this belief is founded on the fact that it is often expensive in practice; but we maintain that where this is the case it is due to an improper application of the system and not because the system itself is defective. A few days ago we indicated an engine there the whole of the exhaust steam is used for heating the feed-water. Under these conditions there is but one pound back pressure above the atmosphere; and even with a heavier load this was increased but little.

At not a very great distance from where this engine is located there is another, where the exhaust from it is used for the same purpose, but in this case the back pressure amounts to nearly fifteen pounds above the atmosphere, simply because the arrangement of the pipe is defective. The idea is that the exhaust steam must have free access to the atmosphere, and where the pipes which convey it do not incline downwards from the engine, suitable drips must be provided. If this is done, it matters not whether the exhaust pipe is ten feet or 5,000 feet, so far as creating a back pressure is concerned. When some men put up pipes for steam heating, it seems to be one of their objects to save in the first cost of pipe as much as possible, without much regard to what the results will be when they come to put them to practical use. This is worse in the case of heating by exhaust steam, for a small exhaust pipe means unnecessary back pressure, and this in turn means an increased forward pressure on the piston, which means more steam used, and more steam means more fuel, which costs money. Thus we can reason from cause to effect in a way that any one can understand if they will give it a little consideration.

Suppose the steam is to be carried from the engine room to the mill where it is to be used, the distance between the two buildings being 50 feet. Now, if we are to use live steam, the pipe in this open space should not be any larger than is actually needed to convey the necessary amount of steam, in order that the passage may be made as quickly as possible, to avoid excessive condensation; but if exhaust steam is to be used, then the pipe should be as large as the size of the cylinder calls for, or else the increased back pressure will far overbalance the benefits derived from a rapid passage of the steam. In either case they should be well protected from the cold air.

Valves and elbows are an obstruction, as a matter of course, but not to such an extent as some engineers would have us believe, provided they are large enough for the duty required and the valves have a full opening; or, in other words, if the passage through the valves is equal to the capacity of the pipe. If the exhaust steam will not go through the pipes in the system with a light pressure, study out the cause of the trouble and apply a remedy in an intelligent manner.

GRAIN BY WEIGHT IN ENGLAND.

THE select committee appointed to inquire and report upon the various weights and measures for the sale of grain throughout the United Kingdom, which sat at the end of the session of 1891, and was reappointed in 1892, have completed their labors and issued their report. The conclusions arrived at by the committee are as follows: 1. That the sale of grain by weight is a better method than by measure of capacity; that it is fairer and less likely to lead to dispute; more convenient and in practice is now very generally adopted, by the custom of using the so-called weighed measure. 2. That the present system of sale by a great variety of weighed measures is objectionable and misleading and should be discontinued. 3. That the best method is to adopt one weight for the standard of reference for sales of all cereals. 4. That the one weight to be adopted should be the hundredweight of 112 imperial pounds. 5. That this weight should be adopted throughout Great Britain as it is already by law in Ireland.

The committee therefore recommend: 1. That the sale of all cereals and the products thereof should in future be conducted in Great Britain, as in Ireland, by a reference to the hundredweight of 112 imperial pounds, and that no other weight or measure of capacity be referred to in any sale; and that legislation should be carried out in Great Britain to give effect to this recommendation. 2. They also recommend that in every case where conversion of weight measure takes place, the weights laid down in Section 8 of the Corn Return Act, 1882, namely, 60 pounds for wheat, 50 for barley and 39 for oats, as the units of conversion for wheat, barley and oats, should always be published in the returns of corn sold in the London Gazette, and a statement made to the effect that the prices quoted in the Gazette are the prices for the quarter of 8 bushels of such statutory weights. The committee recommend, however, that the weight of the bushel of oats should be raised from 39 to 40 pounds.

A RUSSIAN CROP REPORT.

SAYS a late London, England, report: What is stated to be the estimate of this year's crops in Russia by the Department of Agriculture in St. Petersburg, is given by a telegram. It is of a very surprising and depressing character as far as wheat is concerned, for it makes the yield of spring wheat in European Russia 40 per cent. above an average, and puts the total crop at 41,947,000 quarters, 10,560,000 quarters of winter wheat and 31,387,000 quarters of spring wheat. These figures are so extraordinary as to require confirmation before being accepted as final. If they be true, it will mean that, with Poland and the Caucasus added, Russia has this year produced 53,000,000 quarters of wheat. The previous heaviest crop on record was in 1888, when Russia and Poland produced 39,774,000 quarters, and the Caucasus about 7,500,000 quarters, thus giving a total of over 47,000,000 quarters. The rye crop turns out to be nearly 12 per cent. above an average, 87,820,000 quarters, against 72,950,000 quarters in 1892. The following comparison of the wheat and rye crops in European Russia (50 governments) since 1887 will be found interesting:

	Wheat—Qrs.	Rye—Qrs.
1893	(?)41,947,000	87,820,000
1892	32,148,000	72,950,000
1891	20,400,000	60,740,000
1890	25,747,000	80,450,000
1889	24,614,000	63,685,000
1888	37,930,000	84,185,000
1887	34,304,000	83,750,000
Average 1893-87	30,310,000	79,530,000

The average exports from Russia in the five years from 1886 to 1890 were 11,570,000 quarters, and in 1892 the exports were only 5,864,000 quarters, owing to the prohibition. The logical deduction from the above comparison is that, unless the figures relating to the spring crop are incorrect, Russia could, if required, supply 20,000,000 quarters for export, her previous highest total being 15,400,000 quarters in 1888.

DON'T PUT IT OFF.

DON'T let anything connected with the boiler in your charge run from bad to worse, with the idea that at some certain time you will have a general overhauling and repairing, because an accident may occur at any moment, involving serious loss of life and property.

AMONG stevedores cotton is regarded as the hardest to stow and railway iron as the easiest.

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THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and earnestly endeavouring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

RECIPROCITY IN BREADSTUFFS.

BY the time these lines will have been placed in type the Executive of the Dominion Millers' Association will have held a meeting to consider the probable effects upon Canadian trade of the United States tariff, making breadstuffs free, "except," as the clause of the Wilson bill reads, "when imported from countries putting duties on our like products in which case the duty is 20 per cent." In a word the old question is revived: would reciprocity in breadstuffs be a good move for Canada? The answer already made by some millers is a reference to the condition of milling in the years gone by when reciprocity in trade with the United States did prevail. Milling at that time was no doubt a prosperous business. Where profits are hard to find these days the miller did know something then of doing business for profit. The farmer looks with longing eyes to the market he possessed for his products when reciprocity was the commercial policy of the country. And more than one miller has said: Give back to us these opportunities for trade that existed then and the milling industry will no longer remain in a depressed condition." As the cartoonist, Bengough, puts it, "no encumbrances and a clear track," is all that some millers are asking for.

But all millers do not survey the situation alike. There are those who view with considerable alarm the possibility of free trade in breadstuffs. When the years of a reciprocity treaty are pointed to, the reply is that conditions to-day are much changed. The United States miller buys his wheat on an average from 10 to 12 cents a bushel better than the Canadian miller. Take, for example, Detroit as a point of comparison, wheat at the interior there is always bought less than it is at an interior point in Ontario. The Dominion Millers' Association at their meeting of August, 1892, fixed the amount of wheat necessary to make a barrel of flour at four bushels and forty pounds. Calculate on this basis a difference of 10 cents a bushel on wheat, and it must be admitted the Canadian miller will be seriously handicapped in competition with his neighbour across the border.

A more serious difficulty than the difference in price of wheat, is, it is contended, to be found, in the excess of freight rates in bringing the wheat to the miller's door and then shipping it out again to some point in the United States. No miller, whose product runs into figures worth naming, can secure sufficient wheat in his own locality to keep his mill running. He must buy at outside points. He will be buying Manitoba wheat. Say his mill is located in Toronto. He will bring this wheat from North Bay, probably, to Toronto. Buffalo, under reciprocity, would, perhaps, be the objective point. With freight rates against him at the best, and extension of distance caused by the necessity of first bringing the wheat to his mill and then shipping it out again, we leave it to the Ontario miller to calculate what his flour is going to cost him by the time it is laid down in the American market and has come into competition with the product of the United States mills. Whether any like hindrances, or to nearly the same extent, will meet the Buffalo miller who may want to place his flour in Toronto, is another point for the Ontario miller to consider.

Methods of doing business have not a little to do with the success or failure of business in almost any line, and the methods vary according to conditions in different communities. The Ontario miller sells his flour for cash. With the shipment to his customer a draft is made to which is attached the bill of lading. The banker and the miller are both protected should the customer for any reason default on his shipments. The custom, so it is claimed by Canadian millers, in the United States, is to sell flour on 30 and 60 days' credit. Whether Canadian bankers would be ready to first advance the cash to buy wheat, and put up the money again when the wheat should go out as flour is possibly a matter that would call for serious consideration.

There can be no two opinions that the Canadian miller to be successful must find an export outlet for his flour. Mr. N. H. Stevens, of Chatham, was right, when, in discussing the question of "Competition in flour selling," at the last annual meeting of the Dominion Millers' Association, he said, "The remedy for the evil was to be found in an extension of our markets." It is open to discussion, however, to what extent, if at all, reciprocity with the United States would be the means of giving Canadian millers a profitable extension of these markets.

We do not pretend to have nearly exhausted the subject, either pro or con, but have placed certain points before our readers hoping that these may provoke an expression of opinion from them.

PURCHASING POWER OF WHEAT.

A LOW price for an article to-day, compared with what may have been obtained at some former period, does not always mean a depreciation in value. It is possible that $1.00 to-day may be worth as much as was $1.50 five years ago. The Commercial, of Winnipeg, reads the farmers of Manitoba a lesson in political economy along these lines. Remarking that the value of a commodity is its purchasing power, our contemporary points out that the purchasing power of a bushel of wheat is greater than it was ten or twelve years ago. Wheat at 40 to 50 cents per bushel is worth as much to the Manitoba farmer to-day as it was ten or twelve years ago at 75c to $1.00 per bushel. "The bushel of wheat will to-day go as far in purchasing his necessities and supplying his needs, as the bushel would some years ago when the price was high, and when the industry of wheat growing was considered very profitable." This contention is illustrated as follows: "Binders sold some years ago in Manitoba as high as $350 each. It would take about 466½ bushels of wheat, at 75c. per bushel, to buy a binder in those days, and a mighty poor machine at that was secured. Now an infinitely superior machine can be purchased at about $130 to $140 on time, and the ready cash will buy them even lower. At 45c. per bushel it will take only 311 bushels of wheat to buy the farmer a first class new binder, on credit, making a saving of about 155 bushels. In other words, 311 bushels of wheat at 45 cents per bushel, is worth as much to the Manitoba farmer to-day as 466½ bushels were some years ago. We could go on and multiply examples by the column, of this nature, but it is not necessary to do so. What is true of binders is true in a greater or lesser extent of about everything the farmer requires."

This method of argument is not new, but it is none the less economically sound, and like many trite statements it is one that calls for constant reiteration. Some months since the MILLER published an interview with a prominent miller in western Ontario who argued that farmers to-day in Ontario with wheat down to 57 and 60 cents a bushel, were making as much money as when prices were from 85 cents to $1. This argument was applied not only to the greater purchasing power of wheat, but to a lessening of the cost of production of wheat, in consequence of improved machinery, and more intelligent and efficient methods of farming.

A reply to all this may be: Why is there so much depression and hardship in the farming community to-day? Farmers, doubtless, are hard up, but is their condition worse than that of the merchant, the manufacturer, or in fact of anyone engaged in almost any of the vocations of life, agricultural, mercantile or professional. There is a general cause that is affecting commerce as a whole and preventing the wheels of finance from running as slick as we would all wish. Politicians say the fly in the ointment comes from unworkable tariff conditions, and it seems more than likely that things are wrong in this particular; for others besides the politicians are talking of tariff troubles.

EDITORIAL NOTES.

A BY no means uncommon and well-grounded complaint of millers is voiced as follows in the Empire of a day or two since: "Considerable complaint is heard from the millers regarding the rates given by the railways to exporters of wheat. The millers say that they are unable to get any wheat, and have been unable to get it for some time, owing to unjust discrimination. They claim that the through rate to Liverpool discriminates against flour and in favor of wheat equal to 15c. per bbl. of flour."

A NOVEL scheme has been hit upon for virtually prolonging the lake shipping season for the Duluth flour mills by several months. A whaleback is being tied up beside each mill at the head of the lakes, and the additional capacity thus secured, amounting in all to about 300,000 barrels, will be utilized in February and March, to hold the product of the mills and avoid paying rail freight, saving some 20 cents on every barrel. It is expected that if the experiment is successful, vessels may be used every year to thus store the flour.

A LOCAL contemporary can see no escape from the present depressed prices of wheat except for farmers to devote themselves to a greater extent than they have yet done to other lines than wheat raising. This lesson is based on figures like this: "In 1892 the estimate yield of the world was 288,000,000 bushels in excess of the figures given for 1889. The increase in the case of Chili was 5,386,000; the Argentine Republic, 18,000,000; the United States, 35,000,000: Hungary, 44,000,000 and Russia 53,000.000." And yet the paradox is that thousands are starving for want of wheat bread.

A LEADING cooperage firm of Michigan has this to say about the proposed abolition of the duty on Canadian staves: "The Canadians already have an advantage of 5 and 8 cents per 100 lbs. on staves, by reason of water freights to the northwest, which fully covers the present duty. With cheaper labor, under present conditions they have a decided advantage over our Michigan factories. If the new tariff bill becomes a law, the Canadians can afford to manufacture at a price that we can not compete with. It hardly looks well to buy foreign staves for barrels to pack flour used by our own people, while the foreign market calls for jute sacks only."

THE Department of Agriculture for Manitoba in their latest crop bulletin placed the total yield of wheat at 15,615,923 bushels, an average of 15.56 bushels per acre. The wheat this year is almost free from smut. The amount ofwheat already marketed is placed at 9,244,556 bushels, leaving a balance of 6,371,367 bushels still in the hands of the farmers. Of the wheat marketed 6,000,000 bushels have gone east and south as wheat, about 1,000,000 in the form of flour, leaving over 2,000,000 stored in the elevators west of Lake Superior for shipment or for grinding. Of the 6.371,367 bushels in farmers' hands nearly three million will be required for seed and bread; this will leave about three and a half million to be marketed for export. The oats yield is placed at 9,823,935 bushels, and it is estimated that every bushel will be consumed within the province or in the lumber camps to the east. Other yields are estimated as follows: Barley, 2,547,653 bushels; flax, 116,454 bushels; rye, 29,422 bushels.

THE BAKING VALUE OF FLOUR.

By Dr. K. W. Kunis.

IN spite of the fact that for some ten years scientific research has been closely engaged in the investigation of the gluten percentage of flour, and its supposed connection with baking value, and that the results of these investigations have been made public, many heads are still possessed with the old tale that the mere quality of gluten is the sole factor in the baking value of flour. There are the researches of Professor Maerker, of Halle on the Saale, and Dr. Kreusler, of Poppelsdorf, near Bonn. Professor Krocker's studies in different kinds of wheat have shown that there is wheat from which it is impossible to get by washing any amount of gluten at all, and that much had been previously demonstrated by Ritthausen. Then there are the experiments of Herr Chr. Sonne, as well as my own, which, I am not tired of repeating, are very far from having made as much way as they should and met with the acceptance they deserve. And yet those researches must attain much wider publicity if we are to at last reach a clear conception respecting gluten and the baking value of flour.

The word gluten is used to designate that yellowish-grey matter which remains as a residue when the starch is washed out of a wheat flour dough. Now the amount of gluten obtained from one and the same flour will vary with the greater and lesser amount of dexterity in the operator, or with the length of time that is allowed to elapse between the kneading of the dough and its washing, or with the temperature of the water used in the doughing.

As, therefore, a greater or lesser quantity of gluten will be expressed according to the process employed, it is clear that the amount of gluten left after washing out of a given quantity of flour can afford no conclusive test of the nature of that flour. As a matter of fact this was soon admitted, and a standard of the baking value of flour was sought not in the gross amount of gluten, but in other properties of that body. On a given quantity of gluten being baked in a special apparatus, the aleurometer, the rise of the gluten was taken as an index to the baking value of the flour. But even this process may lead to erroneous conclusions, because we never get in the gluten exactly the same proportion of water; now it is precisely the proportion of moisture (that is to say, a variable and in itself irrelevant item, as Professor Dr. Kreusler expresses himself), which is the main factor in determining the degree of spring in the gluten. Gluten will absorb a greater or lesser proportion of moisture according to the length of time it is left about; an internal change will moreover simultaneously take place, as the separate particles of which the gluten consists will be changed under the influence of moisture. It is for this reason that one and the same gluten will give different results when baked at different times.

Bearing these considerations in view the proposition is irrefutable that it is altogether erroneous to draw any conclusion as to a greater or lesser baking value of a flour from the amount of gluten washed out of it, or from the increase obtained by heat in the volume of that gluten. Science and practice have demonstrated that sure and unimpeachable data can never be attained by the said methods, and it is therefore high time that the antiquated proposition about a fixed ratio between the percentage of gluten and the baking value of flour should be at length abandoned.

But of course in establishing this negative proposition we give no answer to the oft-mooted question, "What is the simplest way of determining the baking value of a flour?" By baking value (Backfahigkeit) is understood the capacity of a flour to absorb water and form dough, and then on being baked to assume a greater volume than in the dough. The greater the volume attained by the baked dough, the greater is the baking value of the flour. It therefore allows that to determine the baking value of a flour all that is necessary is to submit a sample of it to a baking test that shall be free of all extraneous conditions. First of all must be taken into account the capacity of the flour to absorb more or less water in doughing. Therefore the test should be based not on the weight but on the volume of the dough, while the increase in the volume of the prepared dough, must be accurately gauged. It is on these principles that the farinometer invented by me (this is an apparatus for testing the baking value of flour, of which more than a thousand have made their way into all lands) has been designed, and practice has proved its efficiency.

If it be desired to test the baking value of flour, it is above all essential to determine what amount of water it will absorb in doughing. We know that every flour "works" differently (a point which many bakers do not take into sufficient consideration), and that in testing these peculiarities must be taken into account. The more water a given weight of flour will absorb in doughing, the higher will it grade in baking value. When dough is exposed to the heat of the oven, a portion of its absorbed moisture will evaporate, and as water undergoes, on conversion into steam, a large expansion, the dough will be broken up and blow out. A dough that contains a large proportion of water and is elastic is in a more favorable condition for further expansion and increase in volume than a dough that contains less moisture and that easily tears asunder. A dough which has absorbed a considerable quanity of water, is likewise in a state to evaporate largely, and the forces that work to its further expansion are much more powerful than in a dough which, having absorbed less water, has naturally less to evaporate. The capacity for holding water in its dough has its limits in every flour.

From a dough prepared with more or less water, a given volume is separated and enclosed in a vessel, in which (for convenience in measuring) it can only expand in one direction. This dough is now exposed to a temperature corresponding to that of the oven and is baked.

Only one factor can be missed in this baking test on a small scale, namely, the lack of such an aid to the breaking up of the dough as yeast and such like bodies. But this is merely an apparent deficiency. Yeast in baking serves to make a spongy dough; the carbonic acid it generates produces a number of cavities in the bread which afford so many points of lodgment to the digestive juices. The yeast expands (literally throws up) the dough in ratio to the capacity of the latter to retain the carbonic acid that has been generated. It serves for the generation of gaseous matter, and to that end it decomposes a portion of the flour, but it does not bring into play any further properties of that body. Yeast, moreover, is not a constant, but, as one may say, a variable factor; it should be borne in mind that its composition varies greatly—we find in the market beside brewers' yeast samples with 60 per cent. of starch while its percentage of water rises as high as 75. Yeast preserved in a normal summer temperature will be no longer on one day what it was the day before. If we would obtain data for comparison, we must necessarily work on material not subject to vary, for if the factors are not completely alike, it follows that no uniformity will ever be attainable in the results. Finally, to get as nearly as possible to actual bakery work, we should have to use extremely small quantities; it would be requisite to weigh off and work in very fine percentage.

In view of the movement for the reform of grain deliveries, that is to say, to restrict the marketing of grain to such varieties as will yield flour of a given baking value of flour and also of grain is of wide interest. The same question arises after every harvest, for it is well known that the baking value of flour from the new crop (literally new flour) is not above all suspicion (as is the case in this year) and that for many mills the secret of success lies in the suitable mixture of different wheats. The estimation of the baking value of flour will teach us how far we must proceed in that direction.

CURING BOILER INCRUSTATION BY PETROLEUM.

PETROLEUM, which is one of the most useful liquids in commercial use, has appeared in a new role. It is said that it affords the best remedy yet known for boiler incrustation. The petroleum is either squirted against the inside walls of the boiler after the latter has been cleaned, or it is added to the water of the boiler when full, so that when the water is slowly run off, the petroleum acts gradually on the sedimentary deposit, rendering it so loose and brittle that it can easily be removed by tools, or even by a powerful stream of water. So far no prejudicial action of the petroleum on the boiler plates has been noticed. It is said that the State Railways Administration in Prussia has adopted petroleum as an incrustations removing medium throughout the whole of its lines.

CORRUGATED ROLLS IN SMALL MILL.

A SMALL out-fit, including not more than three pairs of rolls, should have the break roll corrugated not coarser than 22 and 24, and in many instances 24 and 26 would prove better, says a writer in the Mechanical News. The corrugations, like all short system corrugations, should be round or extremely dull. If convenient to have them made round it will prove much the best plan, but in any case when not round have dull edges to avoid bran cutting. As will be understood, with but one pair of break rolls, the miller must grind very close, or as it is technically called, very low, in order to clean the bran; and in so doing, if the corrugations are sharp, the bran will be seriously cut and comminuted, which will have a very bad effect on the color or condition of the flour. All millers are aware that if finely powdered bran gets mingled with the flour at the start, it becomes next to impossible to ever thoroughly separate them again; the flour feels the taint to the end, and is afterward more or less affected in value when exposed for sale.

PROPOSED CUT IN MILLERS' WAGES.

IT is rumored, says the Northwestern Miller, that in certain sections the mill owners are contemplating a united movement to cut down the wages of operatives, and that in some places this has already been done. In our opinion, such action is exceedingly ill-advised and can hardly fail to lead to future complications which will result in a loss more than equaling any temporary gain which may be in sight. More than that, it will have a most mischevious and widespread effect upon the relations between capital and labor in this industry, which have hitherto been of a singularly pleasant and harmonious character, in marked contrast with the same in other lines of manufacturing. We are exceedingly sorry to see this proposition brought before the milling trade. Should it be carried out to any great extent in any one center, the competition is now so close that others may be forced to follow, and the advantage which the prime movers seek to secure by their short-sighted plan will be immediately nullified. The result will be that the consumer will be the only one that profits by it, and he is already receiving more than full value for what he pays for his barrel of flour.

TRADE NOTES.

THE new Plansifter machines, which are being manufactured for Canada, at Stratford, Ont., are evidently growing in favor among the millers. A recent Minneapolis item says: "Only two bolting reels remain in the Pillsbury A. The rest have been taken out to give room for the plansifters. In six weeks, the full system of these machines will be completed. There will then be 91 in the mill."

NOVEMBER has been an especially busy month with the Waterous Engine Works Co., Brantford. In addition to four large marine boilers, they have received orders for four complete circular saw mills, from 30 to 75 h.p. each. Four single sets of saw irons, ten chopping mills, three under runner mills, one Prescott direct acting steam feed and three Allis band mills, with their attendant machinery; one Veneer machine, two shingle machines, one pulp wood outfit, and a number of export orders. The company have also made arrangements with the W. E. Hill Co., of Kalamazoo, to manufacture their steam mill specialties.

PERSONAL.

THE marriage of Mr. Emile Dube to Miss Isabella Lemieux, of Fraserville, Que., is announced for the 15th of January. Mr. Dube is the active member of the well-known firm of Dube & Fils, flour merchants, Fraserville, Que.

THE late W. H. Howland, ex-Mayor of the city of Toronto, who died from pneumonia, following la grippe, on 12th inst. was an active member of the firm of W. P. Howland & Co., grain merchants. He was a man of large sympathies and great capacity for work. His death is a heavy loss to the business community, he having been actively associated with various commerical enterprises. In 1874 and 1875 he was president of the Toronto Board of Trade, and had also been president of the Dominion Board of Trade. He was a director of various mercantile companies, and at the time of his death he was vice-president of the Millers' and Manufacturers' Insurance Company. He took a very active part in religious and philanthropic work, and died, it may be said, beloved both by rich and poor.

Advertise in CANADIAN MILLER. It pays.

The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, brose meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The MILLER each month covers very effectually the field of flour handlers and buyers of mill products, not only within the borders of the Canadian confederation, but in Newfoundland, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industries. We invite correspondence from millers, shippers and buyers on any matter touching these important questions.

CUT IN FLOUR RATES.

THE story of a cut in flour rates between milling points in Ontario and Boston is told in a recent issue of the St. John Sun. "The winter rate on flour from Ontario milling towns to St. John and Halifax," says our contemporary, "is 55 cents. This rate is charged by both the Canadian Pacific and Intercolonial railways. But the railways connecting the Ontario milling towns with Boston have made a special rate on flour for shipment east from Boston, which low rate enables St. John dealers to get flour delivered here at the present time somewhat below the all-rail rate. A quantity of flour is shipped from Boston to small Bay of Fundy ports. The low Boston rates would make it extremely difficult for St. John houses to re-ship flour received here by rail to customers on the other side of the bay. They were, therefore, in the habit of ordering it shipped direct from Boston to the smaller ports. The Canadian Pacific some time ago met this difficulty by making a special rate on flour brought to their Carleton terminus for shipment by water. The rate on such flour was placed at 42 cents, or 13 cents lower than the freight on flour delivered on this side for reshipment by rail. This movement transferred the point of distribution to this port, and has led to a considerable business in shipping flour from Sand Point. It is said the rate was a cent or two in favor of the Boston route, but the St. John houses were glad to give their own port the preference to that extent. Of late, however, the rival route has made another cut of seven cents. A barrel of flour may now be brought from Guelph or Galt to Boston and thence to St. John for 33 cents. It is rather expected that the Canadian Pacific will meet this cut and hold the business. Such at least is the hope of the flour dealers here."

SACKS VS. BAGS.

AT a recent meeting of the National Association of British and Irish millers held in London, Eng., a discussion that became both lively and prolonged took place on a resolution to alter the weight of sacks of flour from 280 lbs. to 140 lbs. Though one speaker remarked that the matter did not require five minutes discussion, it is to be observed that in the report of the meeting in the London Miller more space is given to this subject than to any other, impressing an onlooker with the idea that it was the burning question of the convention.

We are always interested in the conservatism of English business methods. This conservatism has doubtless been a safeguard from danger in many times of trouble. Where the people of this western continent rush in, sometimes it might be said, where angels fear to tread, the conservative and cautious Englishman makes sure, usually, of the ground on which he has trod before he takes a fresh step in advance.

But where we are often interested in our English friends is in the tenacity with which they hang to minor methods of business, contending for their perpetuation as though some great principle were at stake. We see this illustrated in the discussion that took place among the British millers on sacks versus bags. London bakers, of whom there are seven or eight thousand, who employ probably 14,000 men, have been bringing pressure on the millers to make the change. They are not over-strong men, physically, many of them, and the labor of moving and shifting a 280-lb. sack is heavy. Against this contention there was presented to the association a petition signed by 170 carmen, who have much to do with the unloading and handling of the flour, and they said: "We have no difficulty in carrying the 280 pounds and the alteration would add seriously to our work." This somewhat offset the humanitarian argument that had been used with a good deal of force in favor of the 140-lb bag, albeit that one speaker remarked that the carmen feared that "there is a danger of their livelihood going." By another speaker it was said that "it would cost a great deal more to pack flour in 140-lb bags than in the case of a sack of 280 lbs." The same speaker thought that the ideal package was one of 224 lbs, which any man could carry. A reply to the last contention came from a London miller who maintained that the life of a bag was about twice that of a sack. Where the proposed change hit others was in the fact that the bakers were demanding the change and ye miller was not so sure that he should listen to any dictation from that source. So the British miller labored, we would suppose from the size of the speeches, for several hours, discussing the question from the financial, economic, physical and humanitarian point of view. The original resolution, which was to fix the 140-lb bag as a standard of the association, was finally withdrawn, and the following substantive resolution carried: "That the members of the British and Irish Millers' Association are fully prepared to deliver flour in bags of 140 lbs, or any other weight, when desired to do so by their customers at the time of purchase."

We cannot but view the matter from this side of the water as a simple affair, and as we look at it there would seem to be little doubt that in a short time the 140-lb will become the universal custom in Great Britain, and John Bull will wonder why he had not got there sooner.

BRITISH OPINION ON FLOUR.

A GLASGOW firm, writing to David Plewes, the British agent of a syndicate of Canadian millers, residing at Liverpool, states that stocks of flour in the United Kingdom are far too heavy, heavier than the statistical authorities give them out to be. Beerbohm says that the stocks of flour and wheat in the hands of importers in the United Kingdom are 4,000,000 quarters. We believe that five is under the mark. Supplies in the States are also excessive, and if Canada has not shipped any of her surplus yet, as you think, that is more that has yet to be dumped on the European markets. It looks as if Russia alone would be able to supply all the United Kingdom needs between now and next American harvest. Indian shippers seem to have been pursuing the same course as Canadian, as although they reaped a heavier crop there last March and April than they did the previous year they have shipped very little, holding it back expecting higher prices later on. Then South America and Australia have the promise of a very bountiful harvest.

CURRENT COMMENT.

The Spanish miller is given two meals a day by his employer. That is more than the miller gets in this country, but lest some of our readers should be incited by this to emigrate to Spain, we will add that a miller's wages in Spain are but 40 to 50 cents a day.

The story is told of a speculator in wheat, on whom fortune did not shine, who bought 2,000 barrels of pork on margin in Chicago, and, finding the value declining, gave up eating any kind of meat but pork, thereby doing all in his power to diminish the quantity and so advance the price. It is suggested that producers of wheat and flour and bread in this country might adopt a similar method as a means of reducing the visible supply of their products.

Liverpool, says "Milling" of that city, is, perhaps, alone as a great milling center in the fact that none, or very few of its leading mills, are situated directly upon a railway or canal. In many other towns thousands of pounds have been spent to secure such situations, but in Liverpool many leading mills still occupy the sites of the old wind-mills, and the numerous and almost inestimable advantages of direct communication have been unseen or ignored.

It is an axiom as trite as it is true, that good work is only done with difficulty, if at all, with the surroundings and conditions largely antagonistic to such work. The best workman will require more than the ordinary share of enthusiasm to enable him to do first-class work in a mill unheated, when the thermometer outside is varying several degrees below zero. A contemporary forcefully remarks: "Operatives numb with cold are not likely to give as close attention to their work as they would were the mill not uncomfortably cold. The office stove has a strong attraction that is hard to resist. The machinery will not bear as great strain or give as good results when run in a very low temperature." And there is no reason why mills attempting to do business in a climate like that which Canadians enjoy should not be heated.

The heavy shipments of flour from this side of the Atlantic that keep going into Great Britain are proving a constant source of concern to the miller and bakers of that land. The British and Foreign Confectioner, London, attributes the present depressed conditions of the markets to the bringing in from America of large quantities of low grade flour and "Red Dog," which cannot be made into bread, and is only fit for stock feeding. "This class of flour," says our English cotemporary, "comes into London in large quantities, and, as it is reckoned by merchants of the United Kingdom as flour for bread purposes, it depresses the markets to a greater extent than it would do if the returns showed exactly what it really was. Prices of different flours are affected by the figures, or rather the amount of flour said to be in hand or afloat, when in reality much of it cannot properly be designated as flour in the sense of a bread-making article.

THE FLOUR MARKETS.

THE last month of the year comes upon us with little activity in flour markets. A fair demand exists for domestic uses, but nothing very large in orders is coming to hand. Export business is dull. Offers are being made, but at a price that means no profit, and not unfrequently, would represent a loss to the miller.

PRICES OF FLOUR AND MEALS.

TORONTO.—Car prices are: Flour (Toronto freights), Manitoba patents, $3.65 to $3.75; Manitoba strong bakers, $3.50 to $3.60; Ontario patents, $3.10 to $3.20: straight roller, $2.75 to $2.85; extra, $2.50 to $2.75; low grades, per bag, $4. Bran, $13. Shorts, $14 to $14.50. Flour and Grain Trade Bulletin of the Dominion Millers' Association says of Ontario flour: "Sales—Straight grades at $2.75 to $2.80 west, and $2.90 east; and 90 per cent. patents at $2.80 to $2.90, and 80 per cents. at $3.10, f. o. b. for Lower Provinces. Bran, $11, $12 and $12.50. Shorts, $13, $13.50 and $13.75. Bran, good demand.

MONTREAL.—Quotations: Patent winter, $3.50 to $3.70; do. spring, $3.60 to $3.80; straight roller, $3.00; extra, $2.65 to $2.85; superfine, $2.45 to $2.65: strong bakers', $3.40 to $3.50; Ontario bags, $1.35 to $1.55. Oatmeal, $2 to $2.10.

HALIFAX, N. S.—Flour market, dull; Hungarian patent Manitoban, $4.50 to $4.75; Manitoba strong bakers', $4.10 to $4.30; Canadian pastry, $4 to $4.25; 75 per cent. roller patent, $3.80 to $3.90; 80 per cent. do, $3.60 to $3.75; 90 per cent. do, $3.40 to $3.60: straight roller patent, $3.20 to $3.40; superior extra patent, $3.10 to $3,20; extra, $3 to $3.10.

The New York Commercial Bulletin of recent date says: "The supply of buckwheat flour is so small and demand so good that adulteration by country mills with white corn flour is charged by the trade against some of the stock now arriving. Sales, 700 bags at $3.20 to $3.25; 20,000 Canadian grain recently at 83c., with that bid and 85c. asked in car lots free, and 80 to 82c delivered. We quote: Flour, $3 to $3.25 spot and $3 bid to arrive; state grain nominal at 78c. for black, 81c. bid for silver, or 85c. bid for Japanese, and 80c. on spot for Canada; 83½c. for country delivery."

When your trade is running slow, and your cash is getting low, dont sit down and wipe your eyes! The cure for all is ADVERTISE.

Office of the CANADIAN MILLER,
December 15, 1893.

THE GENERAL SURVEY.

THE discussion on wheat prices gathers strength. All sorts of theories are put forth as to the present low prices, and various are the predictions touching the future. The "Hold your wheat" policy is being urged in some quarters. With others the counsel is to sell quickly. It is pointed out by certain writers that England and Germany are buying Argentine wheat quite freely, the increase in the past four years running into large figures. So it is that competition is increasing in India and Russia. These various changes of the conditions render the work of untangling the wheat problem very difficult. In another part of the MILLER we make more lengthened reference to some of the difficulties that are given in suggestion above. Bradstreet's has this to say of the wheat supply: "The mere fact that prices of wheat continue to lag at or about 60c. per bushel at Chicago seems to a disinterested mind to indicate that the trade, as a matter of fact, do not really believe in the short crop estimates of wheat here this year. If they did put faith in them wheat would be nearer $1 per bushel at Chicago than it has been in a long time, because the demand to buy on speculative account would be extraordinary heavy. It therefore becomes quite plain that, so far as the speculative public are concerned, low crop wheat estimates are completely discredited. As has been pointed out in these columns many times within a few months, the outlook, so far as the wheat crop in the United States in 1893 is concerned, is for a harvest of not less than 440,000,000 bushels, which, if added to about 76,000,000 bushels available reserves carried over on July 1 last, furnishes a total of available wheat for the cereal year of 516,000,000 bushels. Taking out 368,000,000 bushels for probable wants for seed and food for the entire year, 148,000,000 bushels are found remaining available for export, of which, as heretofore explained, about 81,000,000 had been shipped abroad by the middle of November, leaving, as it would appear, about 67,000,000 bushels for export, if needed, between November 16, 1893, and June 30, 1894, a little more than average of 2,000,000 bushels available for shipment weekly during the remainder of the cereal year. On the other hand, if the 380,000,000 bushels wheat crop estimate, or even the 400,000,000 bushels estimate, is to prevail, it is time the trade appreciated what such a shortage in supplies means, and proceeded to buy May wheat to the extent of their ability."

CURRENT PRICES OF BREADSTUFFS.

WHEAT—Toronto—Red and white wheat, north and west freights quoted at 57c., and middle freights 58c. for export. Goose 57c., and middle freights 58c. for export. Flour and Grain Trade Bulletin of the Dominion Millers' Association says of Ontario wheat, car lots: "Ontario fall wheat, very little offering at 56c. straight for fall, and 58c. to 60c. for spring." Montreal—No, 1 hard Manitoba, 69 to 70c.; No. 2 hard Manitoba, 67 to 68c. Chicago—December, 61⅛c.; January, 67⅛c.; May, 68⅛c. Toledo—61½c. bid for cash and December, 67⅛c. asked for May. St. Louis—58⅜c. for cash, 58⅝c. bid for December, 58⅞c. bid for January, 64¼c. to 64⅜ asked for May. Duluth—Wheat, No. 1 hard, 61c. for December, 65¾c. for May: No. 1 northern, 60c. for December, 64½c. asked for May.

BARLEY—Toronto—Only a limited demand; No. 1 sold at 40c.; seed at 35c. west and 36c. east. A Buffalo dispatch of 14th inst. says of American barley markets: Fancy western, 66 to 67c.; choice, 60c.; lower grades 48 to 56c., according to sample; state 67 to 72c. At New York—Barley steady; No. 2 Milwaukee, 61 to 62c.; western, 50 to 64c. At Milwaukee—Barley, 48c. bid for January. Receipts, 22,000 bush.; shipments, 2,000 bush. At Chicago—Barley, No. 2, 52c. Receipts, 67,000 bush.; shipments, 28,000 bush.

OATS—Toronto—Steady; prices ruling about 29 and 29½c. Mixed and white on track are quoted at 32 and 32½c. Buffalo—Offerings light; No. 2 white, 34¾c. on track, 34½c. in store; No. 3 white, 33½c. in store. No. 2 mixed quoted at 32½ to 33c., closing easy. Sales, 4 cars No. 2 white, 34¾c. on track.

PEAS—Toronto—An export of 30,000 bushels was sent via St. John within the past few days. Ruling prices are 51½ to 52c. for No. 2 north and west freight.

RYE—Toronto—A fair trade doing, sales being made at 45c.

THE MAN AND THE MACHINE.

THERE was a former time when an issue was made in the minds of working people principally in the form of "Men vs. Machines," and a labor saving invention was believed to be entirely antagonistic to the interests of manual labor, says the Metal Worker. In mechanical processes especially brains were popularly considered a less important factor than muscle, and men clung to primitive ways because they were old, and to their limited views, satisfactory. Happily, that time of obstinate ignorance is past, the prejudice against machines has largely abated, and the trials of inventors have taken a different form. It is probably that the triumphs of steam have so settled opposition that its competitor and possible successor, electricity, will have less to contend against. We have learned that the man and the machine are not in opposition, but are both important factors in the world of industry.

We would call attention to what may be termed the teaching of machinery, meaning the attempt to learn from its operations, if possible, a way of working which the artisan may copy to advantage. The machine, while it is on duty, so to speak, attends strictly to business, carrying on processes of construction assigned to it, whether simple or complex, in a consecutive, orderly, and perhaps monotonous manner. We do not imply that the man should be a mere automaton, but that the head and the hands should both be interested. If the labor is such that the hands do it nearly independently, the head may be seeking a method of helping them. In this manner inventions are generated and the machine is made which does the work faster and better than it was previously done. In those constructive operations where the machine has not replaced the man, experience has taught that the doing of the right thing at the right time, or "machine fashion," is productive of the best results. The discipline of soldiers, which is largely effective in producing a reliable fighting machine which moves at the will of a controlling mind, is illustrative of that attention to routine and detail which the young mechanic will find a good rule to work by. The machine has come to stay, and the man must adapt himself to it, learning the lesson that undivided attention to the work in hand, with a systematic progression, from start to finish, will make him successful both as a man and a machine.

DANGEROUS PRACTICE.

IT is always dangerous, says Locomotive, to calk leaky joints, or screw up nuts, about boilers that are under pressure, and many accidents result from doing so. The other day we learned of an accident of this kind. The engineer undertook to tighten up a leaky cap on a sectional boiler while the boiler was under steam pressure. A slight twist did not seem to do any good, so he gave the cap a good, vigorous wrench. Immediately steam and boiling water began to pour out, increasing in quantity every instant. He could not get away quickly enough and was severely scalded all over the upper part of his body. His assistant was down in a pit in front of the boiler and was immediately overcome by the scalding cloud. The assistant was dead when the cloud had subsided enough to allow of his removal.

NOISY OIL FUEL.

IF oil is to be the future fuel for steam making, some inventor who will devise an easy way to get around the noisy part of the burning, will be a benefactor if he doesn't make a cent, says an exchange.

COOPERAGE D'P'T.

There is a close affinity between the work of the cooper and the business of milling. The miller is either his own cooper, having a cooperage as an adjunct to his mill, or else he rests for his supplies on an outside cooperage. The cooper in any case finds one of his best customers in the miller. The object of this department is to bring each in close touch with the other and to materially advance the interests of both trades.

TRADE REVIEW.

A GREAT stir has been created in cooperage circles by the proposed action of the United States to take the duty off staves; there is not the least doubt but the new tariff bill will go through practically unchanged and staves will be on the free list from March. No doubt this will have the effect of raising the price of staves in this country, as there is an unlimited market in the United States for the output of Canadian mills. The present duty on staves is 10 per cent. and when this is taken off 10 per cent. will go on to the price of staves f. o. b. cars at mills for the Canadian consumers.

Up to the present time the winter has not sufficiently developed to tell whether we are going to have a full stock of logs or not. There has been some slight sleighing, but the amount of logs that has been put into mills is very inconsiderable. The prices of staves, hoops and heading have not materially changed for the last three months, but from the first of the year there is no doubt but prices will be raised owing to the scarcity of dry stock. Many mills are now using kiln dried stock which is worth 25 cents per thousand extra f. o. b. cars at mills than the air dried stock. The following are the present prices on cooperage stock delivered at Toronto:

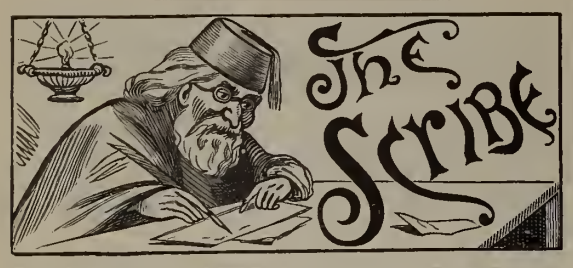
	Per net 1,000
No. 1 30" jointed elm staves	$5 55
" 2 30" " "	3 55
" 1 24" " "	4 60
M. R. 30" " "	5 20
No. 1 5½ft. patent coiled hoops	6 00
" 1 6½ft. " " "	6 60
	Per set
No. 1 17⅛" kiln dried heading	4½c.
" 2 17⅛" " "	3½c.

12 in. head-liners, 40c per net 1,000.

COOPERS' CHIPS.

Of the Chicago markets the Lumberman of that city says: The cooperage market, so far as this city is concerned, has practically gone to pieces. Tierces are dull at 90 cents, and barrels slow sale at 70 to 72½ cents. Packers are not anxious to buy, and sales can only be made at less than cost. Overproduction of tierces and light receipts of hogs are the principal causes of present conditions. It is thought there are enough prison tierces on hand to supply packers for the balance of the season. Some shipments of hoops are now arriving which could not be got in earlier, and returns on these will be disappointing as the market is overstocked. Prices on all classes of cooperage are only nominal.

Commenting on the new tariff bill, so far as it effects staves, the Northwestern Miller says: This measure, as now framed, makes staves free of duty, and would relieve the Canadian dealers of a duty of about 50c. per M which they now have to pay on shipments to the United States. They already have a decided advantage over Michigan, Ohio and Indiana manufacturers, by being able to ship by lake at least six months in the year, and with the tariff removed entirely, they would have 50c. per M more in their favor. Upon logs brought from Canada into this country there is now no duty. In well-posted quarters the feeling seems to be that the tariff bill will be passed by Congress without any great modification, particularly as to staves. Some dealers, reasoning from this point of view, are inclined to discount the future by asking a little less for staves. As far as Minneapolis is concerned, $6.75 is the prevailing price for elm, though there is no buying to test the market. A few of the shops have begun to use a limited number of oak staves to make their barrels less vulnerable to the effects of cold, frosty weather and are able to buy the staves at 12 to 12½c. per set. Little or no oak has been used in Minneapolis for quite a long time, and Wisconsin dealers are disposed to make low figures in order to get it in favor again. There is some little demand for heading, and the shops seem to have no trouble in getting what they need of No. 1 for immediate use at 4c. per set. One shop manager, however, claimed that he could not buy at less than 4½c.



THE Empire has been publishing a series of interviews with prominent business men asking each the question, "How should a young man invest his first $100?" Mr. J. L. Spink, the successful miller, has answered the question in these words: "If the young man's education was very limited as mine was I would advise him to expend his first $100 in getting a thorough knowledge of bookkeeping as I did. That is the history of my first $100, and if I had life to live over again I would do the same thing. It may not have been the first $100 I ever owned, but it was practically the first hundred I ever got which I could afford to spend in this way. As to investment, I would say that there are in all lines of business in our day plenty of men with ample capital and my idea is that a young man starting in life should fit himself either in a trade or profession where his talents and ability will stand as a set-off to capital, which he can always borrow. Nearly all men who are at the head of the different commercial enterprises to-day started at the lowest round of the ladder and fitted themselves for the positions they now occupy by their knowledge of every detail, and it seems to me that this is a well-beaten path by which all young men must travel to future success or position." Mr. Spink's own business career began in a country store thirty-one years ago at $5 a month.

* * * *

Spoken to in regard to the proposed changes in the United States tariff, several Montreal millers and dealers have expressed their opinions. Mr. W. W. Ogilvie said, "It will not affect the milling business." Mr. D. A. McPherson, of the well-known produce exporting house of D. A. McPherson & Co., and president of the Corn Exchange, said: "I have no doubt it will be of great advantage to Canada in many ways. Barley, the sale of which to the United States had altogether fallen off, will once more be in demand from the other side. Canadian farmers have grown very little barley for the past two years. It is a well-known fact that the United States was willing to pay 15 to 20 cents per bushel more for Canadian barley than was obtainable for the American product." Mr. E. F. Craig, flour and grain dealer, said that if the Dominion Government would meet the American Government in the same spirit, it would undoubtedly be a good thing for Canada. He believed that it was the thin edge of the wedge for reciprocal trade. It would be a great thing for the farmers, especially as regarded barley, as it would give us an outlet for that product.

* * * *

Toronto millers and grain men have been expressing their views on the new Wilson tariff bill. Mr. H. N. Baird said: "As I understand it, everything is now left with this country, and we can keep up or take down the tariff wall on breadstuffs. It would be of immense benefit to this country if the duties were removed, and I think the government should lose no time in meeting the Americans half way." "I don't want to become a prophet," was Mr. J. L. Spink's reply to a question regarding the probable effect on Canada of a reciprocal trade in breadstuffs with the United States. He continued to say, however, that the result of the change would be an entire change in the Canadian trade. Canadians would have to compete with Americans and Americans with Canadians in the countries of each. Some mills would likely go under, but the fittest would survive. There would not be a much wider market for either country, because the supply of both are equal to the demand." He has not yet made up his mind as to whether or not Canada should place breadstuffs on the free list. Mr. J. F. McLaughlin said that there was no reason why the old trade in barley should not be revived. He thought if Canada took advantage of the offer to admit breadstuffs into the United States free of duty, Canadian millers would be immensely benefited, and especially the millers of Ontario, who would virtually control the trade of the Eastern States. The present duties of both countries are virtually exclusive duties.

* * * *

A well-known local baker criticises the contention of a Toronto flour dealer in the November MILLER, that the profits of the bakers at the present price of flour run into a considerable figure. He says: "Flour dealer reckoned up the cost as follows: One barrel flour produces 66 loaves at 10c., $6.60; flour cost per barrel, $3.80; baking and delivery cost $1, $4.80; profit per barrel, $1.80. If the dealer in question had consulted any intelligent baker he would have found that his calculations were away out. In the first place my flour averages $3.91 per barrel, but, taking the price at $3.80, has the baker no other expense beyond that of baking and delivering? Will our friend, the dealer, ask some of his miller friends if they have no expense beyond the price paid for the wheat, and the bare cost of running the machinery to convert it into flour. What of expenses for rent, and interest on capital, gas bills, office work, and such items of expense as insurance, wear and tear, etc? expenses that the baker has learned are very real. In order that I may not trespass further than necessary on your space, I will simply state for the benefit of this dealer and any others whom he may have been the means of misleading that there must be added to his calculation of the cost fully $1.13 per barrel for merchandise other than flour, general inside expenses, bad debts, interest. This leaves 67c. per barrel, and if the price of bread be reduced 1c. per loaf (which would represent the price that many sell at to-day), there is left, to the greedy baker, the very substantial profit of 1c. per barrel. Truly experientia docet and your dealer's remarks also teach something, and that is, that a good deal of allowance must be made for the fault-finding and grumbling of outsiders when dealers in flour who are supposed to know something of business can put such erroneous statements into print."

* * * *

There passed away to his long home on 10th December, Mr. Thos. Lawrie, who was perhaps the oldest millwright in Canada. The deceased was the father of Mr. W. S. B. Lawrie, of the firm of Wm. & J. G. Greey, of this city, with whom I had the pleasure of talking a few days since. He says that his father was a Scotchman by birth, coming from the county of Haddington, where he was for many years in business connection with the late John Gartshore, of the Dundas Foundry, and resided in the town of St. Catharines from 1837 to 1856, after which he moved to Dundas, where he lived for four or five years, finally settling in Hamilton, where the last active years of his life were spent. About eight years ago he suffered the loss of sight of one eye, incapacitating him from further work. Since this occurrence he resided in the city of Detroit, with his daughter. During his long and active life he was well known by the milling fraternity, and many of the best mills in the old times of stone milling were planned and constructed by him. Probably the last mill the deceased built was one for Mr. R. Noble, of Norval, Ont.; the elevators of the G.T.R. at Sarnia, and also the C.P.R. at Owen Sound, were constructed under his supervision. Very interesting were the stories that the Senior Lawrie could tell of mill building in Canada in the days when water and not steam or electricity were the propelling power. The millwright of to-day does not need to worry himself o'er much about either the overshot or the undershot wheel, but it was not so in the days when Mr. Thos. Lawrie commenced mill-building. Mill-building was slow work in those pioneer days. There was no such a thing as constructing the machinery in a large mill-building concern like the Greeys, and shipping it to be placed in proper place within the walls of the mill building. Everything was then constructed on the spot. Such is the progress of flour milling the past half-century, for the connection of the deceased with the milling trade went back to 1835. Born in 1812, Thos. Lawrie died full of years, aged 81. Four sons and two daughters survive him.

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THE NEWS.

CANADA.

—John Plewes is negotiating for a grist mill in Wentworth township, Ont.

—A million and a half bushels of wheat are still in Port Arthur elevators.

—The new Canadian Pacific railway elevator at Quebec city was opened on December 2nd.

—E. D. Tillson, of Tilsonburg, Ont., is making important additions to his milling property.

—The flour mill operated by J. W. Ford, Jr., at Flesherton, Ont., was destroyed by fire a fortnight ago.

—J. Fair, Clinton, Ont., has placed in his mill what is said to be a very complete system of fire protection.

—The grist mill at Port Albert, Ont., formerly owned by J. Mahaffy, has been rented by Platt & Runciman.

—Ratz Bros., of Tavistock, Ont., secured a medal at the World's Exposition for their popular brands of flour.

—John McFadden, night miller at McDonald & Robb's mill, Valleyfield, Que., had his hand badly crushed whilst engaged at his work.

—Brackman & Ker Milling Company, Victoria, B.C., were awarded a gold medal at the World's Fair for their brand of rolled oats.

—Hilsborn & Brubachor of Berlin, Ont., are adding new machinery to the mill, known as the East End Mill, which they recently purchased.

—The last car of machinery has reached the new flour mill at Hartney, Man., and it is expected that the mill will soon be ready for operation.

—A shipment of 10,000 bushels of wheat, 100 tons of flour and over 1,000 tons of flaxseed was recently received at Sarnia, Ont., from Southern Manitoba.

—It was Jacob Steinmiller, not John Steirmiller, of Waterloo, Ont., as mentioned in last month's MILLER, who carried off a medal at the World's Exposition, Chicago.

—Two thousand eight hundred bushels of wheat were stolen from a barn and granary on a farm near Virden, Man. The grain was held by a trust and loan company in Winnipeg.

—Stanley & Dight's storehouse at Lucan, Ont., was burned on 1st inst., with 17,000 bushels of wheat. Loss about $10,000, partly covered by insurance. Cause supposed to be incendiary.

—The propellor Tilley, with grain from Fort William to Kingston, went ashore at Nine Mile Point, Lake Ontario, on Nov. 26. A ug and floating elevator were sent to her assistance and after lightening about 8,000 bushels the Tilley came off and arrived at Kingston the same day. It is not supposed the vessel or cargo is much damaged.

—The Canadian Pacific railway have arranged to ship 16,000 bushels of Ontario wheat and about 1,000 tons of Quebec hay to the English market from the port of St. John, N. B., as an experiment. The undertaking is important, as marking the first effort of the road to use St. John as a winter port for the upper provinces.

—The steamer Miles from Fort William, bound to Owen Sound with wheat, lost her rudder off Cabot's Head on December 2nd. After drifting in sight of Christian Islands on Sunday the crew rigged up a temporary rudder, using the steamer's topmast for a rudder post, and managed to arrive off Owen Sound on December 5th, when she was picked up and towed into port.

—The C. P. R. has made a move that is proving quite gratifying to the people of St. John, N. B., and it is thought to the Dominion as a whole. Hitherto the winter business of Canada has been done largely from New York, Boston and Portland. Recently the C. P. R. acquired the short line between Montreal and St. John with a view, as now appears, to use St. John as a winter port. To further the plan the city gave a bonus of $40,000 for the erection of an elevator which has now been completed. The first consignment from St. John has now been made. It is 16,000 bushels of wheat, and is the commencement of a trade which is expected to expand enormously. The new elevator has a frontage of 400 feet and a depth of 27 feet and upwards at dead low water, spring tides. The wharf, therefore, is capable of accommodating one steamship of the largest size, or two smaller vessels; and, as it is connected with the grain elevator, it offers ample facilities for the loading of steamships with grain. The elevator, which is situated on the city wharf, is entirely modern in its construction, and it has been pronounced by expert judges the best elevator in Canada. It has a storage capacity of 350,000 bushels, and the machinery which it contains is quite sufficient if its storage capacity should be doubled. The elevator has a capacity for loading an ordinary freight steamship in from four to six hours. It is estimated that four million bushels of grain can be shipped there monthly, provided that there is not too much detention on the railway.

CAPTURE OF LEON M. CARRIER.

STORY OF AN INTERESTING CHASE.

THE chase of the Canadian Pacific Railway after Leon M. Carrier, the defaulting flour dealer of Quebec, has finally ended in the capture of the absconder. It will be remembered that Carrier was a commission merchant in Quebec city. On April last he went to different grain and flour merchants in Quebec and made contracts for the delivery of flour and grain, principally flour, at figures considerably below the market price, cash to be paid. He secured orders covering a large quantity of flour, after which he went to different milling points in Ontario and made contracts for consignments of flour sufficient to cover the orders he had taken. Carrier agreed to pay slightly above the market price for this flour, only stipulating that it should be in Quebec on May 10. Some forty-five carloads reached Quebec on this date, billed to the order of the various banks there. The flour altogether was worth about $35,000. Carrier called on the Canadian Pacific agent at Quebec, and, under the promise of having the bills of lading surrendered before the cars were unloaded, had the cars placed before the warehouses of the parties to whom he had sold the flour. Instead of surrendering the bills of lading, however, Carrier did not take up the drafts at the banks, but, securing the payment for the flour from the merchants to whom he had sold the flour, he skipped out. The banks came on the Canadian Pacific and wanted the grain or the money. The railroad put up the money, $35,000 in all, and determined that Carrier should not escape. Pinkerton's Agency was engaged in the case, and the chase for Leon Carrier commenced. Carrier first went to New York city, where he took one of the Atlantic liners for Southampton. From Southampton he fled to Havre; from Havre to Paris, then to Geneva, in Switzerland, and back to Paris again. The detectives were by this time on his track and followed Carrier to all these places, the fugitive keeping ahead of them, however. From Paris Carrier went to London and sailed again for New York. He next visited Chicago, where he met his wife, who had gone on to meet him. Madame Carrier left Chicago for Denver, while Carrier himself proceeded on to Mexico. From Mexico Carrier went to Denver to rejoin his wife, and here his wanderings were abruptly brought to a close by the detectives who had followed him around the world. At Denver he was arrested on nine warrants issued at Quebec and charging him with the larceny of the cars above mentioned. The extradition proceedings were of a very interesting nature. There was a large array of legal talent on both sides. Carrier had no less than four lawyers. Their contention was one of obtaining goods under false pretences, an offence not extraditable under the extradition treaty. The Canadian Pacific contended that it was a case of constructional larceny. The case was heard before Judge Hinsdale of Denver. Mr. Charles Fitzpatrick and three other lawyers represented the prisoner, who brought four witnesses from Quebec to testify in his behalf. The hearing lasted for three weeks, when the judge decided to hold the prisoner for extradition, under the clause of the extradition treaty which gives the fugitive sixty days in which to appeal to the Secretary of State in Washington. The clause Carrier availed himself of, and his attorney, Mr. Taylor of Denver, and Mr. H. V. Johnson of Denver, representing the Canadian Pacific Railway, proceeded to Washington and argued the case before Secretary of State Gresham. The latter confirmed the decision of Judge Hinsdale. An official of the Canadian Pacific was sent to look after the interests of the company in Denver. He was also despatched again last month, with the documents authorizing the prisoners transport back to Canada. When he reached there he found that Carrier had bribed the gaol officials and was out on the street visiting faro banks and having a good time generally. Before the United States Marshall Carrier admitted that he had bribed his gaolers, who were indicted before the Grand Jury. Carrier further stated that he had been offered his liberty for $7,500. Detectives Patry and Walsh of Quebec brought Carrier back and he was landed in Quebec on the morning of November 29, or just 203 days from the time he had fled from Quebec. It is said that the chase and capture of the proceedings against Carrier have cost the Canadian Pacific Railway a large sum of money.

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32 Church Street, Toronto

The President, James Goldie, Esq., in moving the adoption of the report on the business of 1892, said: I have much pleasure in drawing your attention to the fact that this company has verified, in a marked degree, every expectation set forth in the original prospectus when organized in 1885.

Up to the present time the insurers with this company have made a saving, when compared with the current exacted rates, of $91,004.20. And in addition thereto bonus dividends have been declared to continuing members amounting to $21,522.72.

Besides achieving such result, we now also have, over all liabilities—including a re-insurance reserved (based on the Government standard of 50 per cent.—(50%), a cash surplus of 1.93 per cent. to the amount of risk in force.

Such results emphasize more strongly than any words I could add the very gratifying position this company has attained. I therefore, with this concise statement of facts, have much pleasure in moving the adoption of the report.

The report was adopted, and the retiring Directors unanimously re-elected. The Board of Directors is now constituted as follows: James Goldie, Guelph, president; W. H. Howland, Toronto, vice-president; H. N. Baird, Toronto; Wm. Bell, Guelph; Hugh McCulloch, Galt; S. Neelon, St. Catharines; George Pattinson, Preston; W. H. Story, Acton; J. L. Spink, Toronto; A. Watts, Brantford; W. Wilson, Toronto.

HUGH SCOTT, Mgr. and Sec'y. **THOS. WALMSLEY,** Treasurer

Mineral Wool Pipe and Boiler Covering

If you want to save fuel . . . . .
" " " dry steam at long distance . .
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" " " " cold water pipes from dripping
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USE MINERAL WOOL SECTIONAL COVERING

THE best non-conductor is the cheapest covering. Mineral Wool heads the list as a fire-proof non-conductor. Hard pressed coverings are poor non-conductors, and are therefore the most expensive in the end.

A good pipe covering is one of your best investments. It is false economy to have uncovered pipes, as you are just paying the coal man what the covering man should have, and only ashes to shew for it. Give the matter your consideration, it means money to you.

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— USE —

MYERS' ROYAL CATTLE SPICE

TESTIMONIAL.

DEPARTMENT OF AGRICULTURE,
ONTARIO,
Toronto, March 17th, 1893.

Gentlemen,—We have used Myers' Royal Cattle Spice during the present winter with both cattle and sheep. It seems to be equally valuable for both. I noticed especially the benefit on a lot of yearling rams. The change in their appetite and appearance was easily perceived after the first week or ten days' feeding, and they have steadily and rapidly gained since.—Yours very truly, (Signed) JOHN DRYDEN.

Messrs. Myers & Co., Toronto.

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— OF THE —

STEAM BOILER AND PLATE GLASS INSURANCE COMPANY

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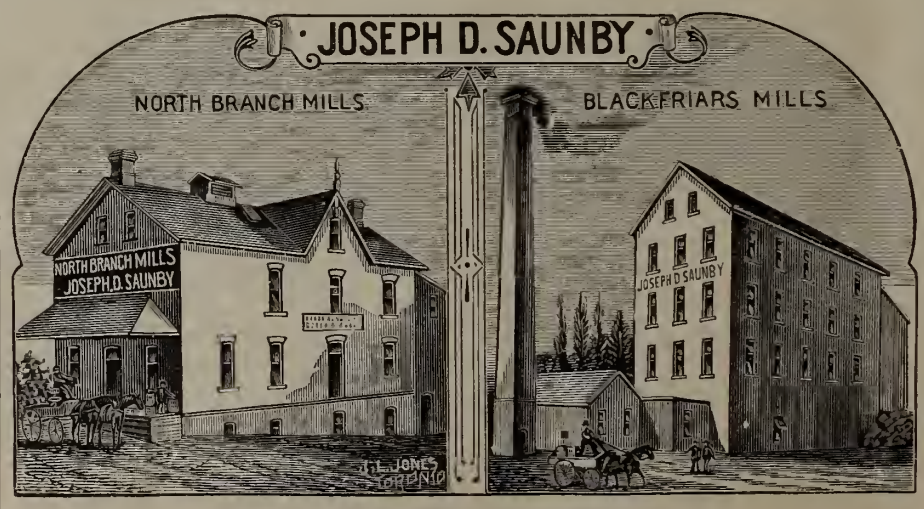

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ALLIS ROLLER MILLS
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PERFORATED STEEL SCALPERS
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THE BROWN AUTOMATIC CUT-OFF ENGINES

The Best, most Economical and Durable in the market

Read what Archibald Campbell, M.P., has to say regarding his mill :

TORONTO JUNCTION, NOVEMBER 28TH, 1893.

NORTH AMERICAN MILL BUILDING CO.,
STRATFORD, ONT.

GENTLEMEN,

I have much pleasure in informing you that the contract you entered into with me n December last year, to complete a six hundred barrel mill for me here, has been completed to my entire satisfaction.

The mill has now been running nearly four months, night and day, and we have had scarcely a moment's delay on account of anything going wrong with your machinery, while the quality of the flour is giving such good satisfaction that I have been able to dispose of the whole output as fast as made.

The plan adopted of building the mill in two parts—one side for hard Manitoba wheat and the other for soft winter wheat, has been eminently successful, as I am thus enabled to make more even and better granulated flour than could possibly be obtained under the old system of mixing the wheat before grinding.

The capacity of the mill is also greater than we agreed upon (we having turned out nearly seven hundred barrels in the twenty-four hours), while the clean up of the offals and the general run of the flour is the best I ever saw.

I have been in the milling business for a great many years, and have had to do with many different kinds of mill machinery, but I am better pleased with your work than with any other that I have had to do with.

If you complete all your contracts as you have mine, I am sure you will be very successful in mill building.

Yours very truly,

ARCH. CAMPBELL.

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Mill Building
A SPECIALTY
NOT A SIDE LINE

Full line of most modern and improved Machinery furnished for Mills of large or small capacity from basement to attic.

Prices as low as any in the market consistent with first-class Material, Workmanship, Style and finish.

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GENTLEMEN,

We have thoroughly tested the "Andrews" Lumber Dry Kiln furnished by you and must say that it more than surpasses our expectations. We put green spruce lumber in from the saw dripping with water and in 18 hours it was drier than lumber that had been stuck up in the yard all summer, and in four days it was as dry as a bone, and without nearly as many checks or warps as the same grade air dried.

A very important feature of the "Andrews" Kiln is that it saves so much steam over that of any other system.

You may refer any one you like to us, or send them down to inspect, and we can satisfy them that your kiln cannot be beat.

Yours truly,
EASTMAN LUMBER CO.

WHAT?

WHY

CHATHAM, ONT.,
August 25th, 1893.

A. G, MORTIMER, ESQ.,
Manager Dominion Dry Kiln Co.,
Toronto, Ont.

DEAR SIR,

The "Andrews" dry kiln, which I purchased from you has now been in operation over a month, and is so perfectly satisfactory that I cannot say enough in its favor.

I use very little steam and my staves come out as dry as a bone, and are not in any way injured by warping or discoloration.

Yours truly,
(Signed) N. H. STEVENS

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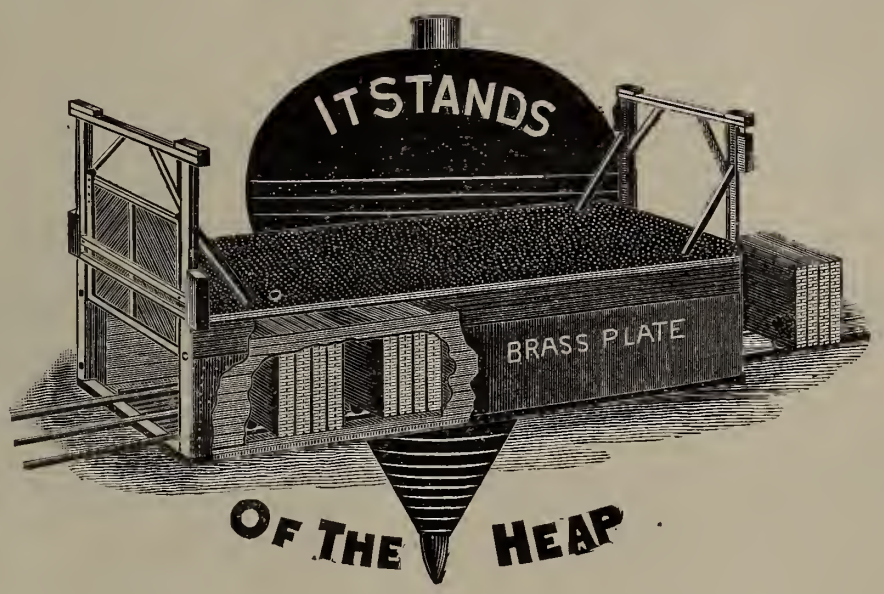
THE
GOLD
MEDAL



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FOR

Lumber, Shingles, Heading and Staves

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THE DOMINION DRY KILN CO.

TORONTO, ONT.

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PROGRESSIVE MILLER
WILL READ THIS

OFFICE OF
PENN YAN ROLLER MILLS.

PENN YAN,
Nov. 16th, 1893.

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STRATFORD, ONT.

GENTLEMEN,

Answering your esteemed favor of the 15th inst., would say that we have the Plansifters working in our mills both on wheat and buckwheat. We like the operations of them very much. We think they are at least equal, if not superior, to the most modern round reels. They possess many advantages which the reels do not. They run with very much less power, and the saime capacity can be produced in a much smaller space.

The yield and quality of the product we are now getting is much superior to that which we formerly had under the reel system.

We have given them a very thorough trial, and do not believe there is anything equal to them in the way of a bolting device.

Yours very truly, RUSSELL & BIRKETT.

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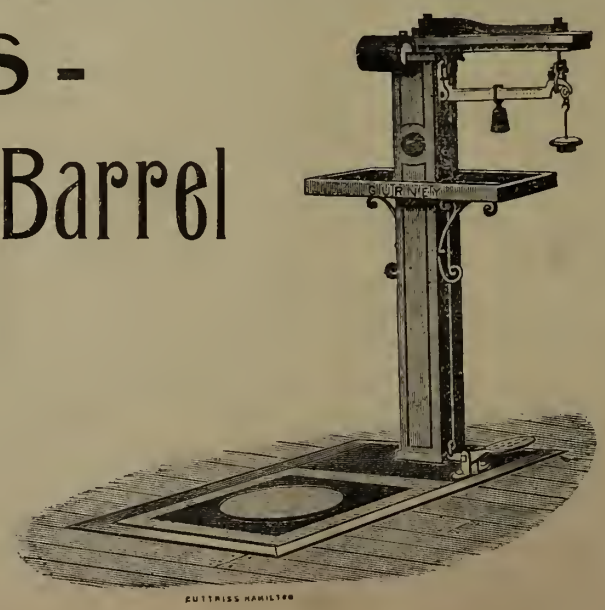

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This Scale replaces the old style of "Flour-Packing Scale," and is superior to it in many respects

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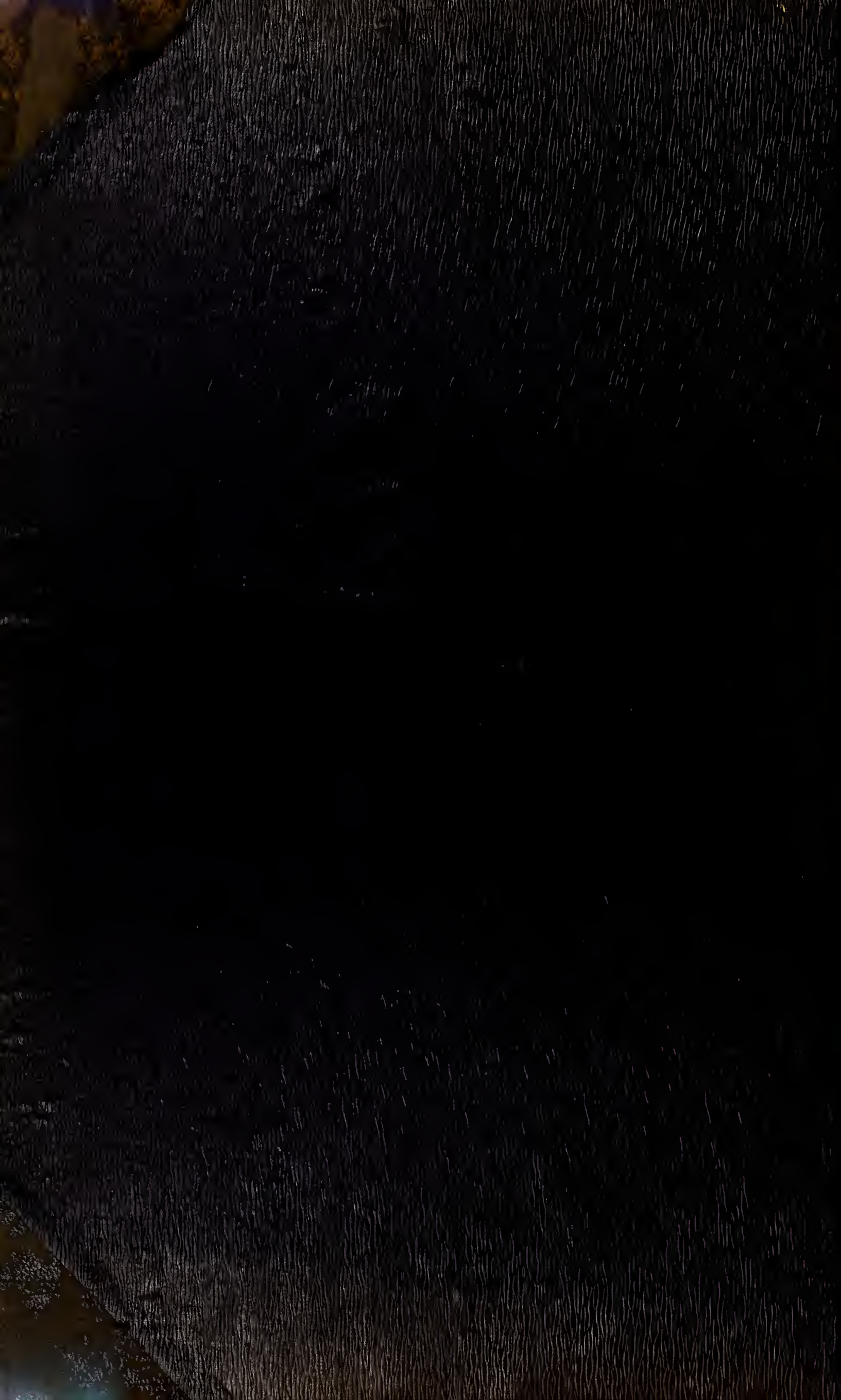
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